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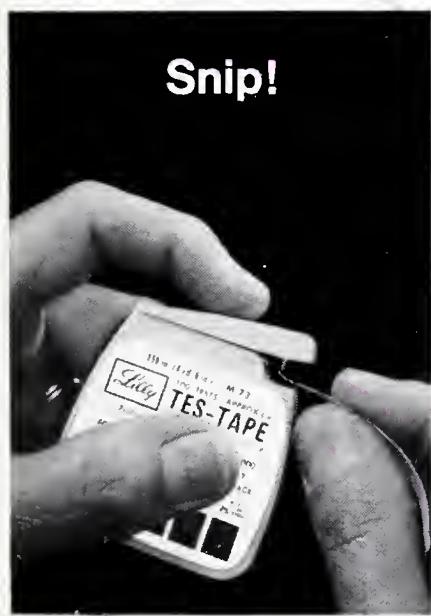


June, 1972

# THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 69 No. 1

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**ROBERT WATSON**  
**Little Rock**  
**PRESIDENT**  
**ARKANSAS MEDICAL SOCIETY**  
**1972-1973**



**THE JOURNAL OF THE**

*Arkansas* **MEDICAL SOCIETY**

PUBLISHED MONTHLY UNDER DIRECTION OF COUNCIL

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## PROCEEDINGS

### *96th Annual Session*

## ARKANSAS MEDICAL SOCIETY

Arlington Hotel, Hot Springs

April 23 - 26, 1972

### **First Meeting**

#### **HOUSE OF DELEGATES**

The first meeting of the House of Delegates convened at 1:00 P.M. on Sunday, April 23, 1972, in Room "C" of the Arlington Hotel Conference Center with Speaker of the House Amail Chudy presiding.

Invocation was led by L. J. Pat Bell of Phillips County.

The Executive Vice President, Mr. Schaefer, called the roll of delegates. The following delegates, officers, and members seated as delegates by action of the House were present:

ARKANSAS, R. H. Whitehead; ASHLEY, W. A. Regnier; BAXTER, Jack C. Wilson; BENTON, James R. Knapp; BOONE, Robert Langston; BRADLEY, James W. Marsh; CHICOT, C. D. Blackmon; CLEBURNE, William M. Wells; COLUMBIA, Paul Sizemore; CRAIGHEAD-POINSETT, John B. Kirkley, F. M. Wilson; CRAWFORD, Millard C. Edds; DALLAS, John H. Delamore; DESHA, Guy U. Robinson; DREW, J. P. Price; FAULKNER, C. A. Archer, Jr.; GARLAND, W. R. Mashburn; GREENE-CLAY, A. J. Baker; HEMPSTEAD, George H. Wright; INDEPENDENCE, Jim Lytle; JEFFERSON, C. C. Tracy, Banks Blackwell; LAWRENCE, J. B. Elders; LEE, D. W. Gray; LOGAN, B. G. Parker; MILLER, Donald Duncan; MISSISSIPPI, Joseph Beasley; MONROE, N. C. David, Jr.; OUACHITA, A. E. Thorne; POPE-YELL, Charles F. Wilkins, Jr., James M. Kolb, Jr.; PULASKI, F. R. Buchanan, Frank

Morgan, Frank Padberg, Gilbert O. Dean, G. Thomas Jansen, Frank M. Westerfield, John McCollough Smith, Curry B. Bradburn, Jr., John V. Satterfield, James R. Weber, Ashley S. Ross, Jr., William N. Jones, Guy Farris, W. Myers Smith, Julian L. Foster, Leighton Millard; SALINE, Donald Viner; SEBASTIAN, Neil Crow, Homer G. Ellis, Carl Williams, A. C. Bradford, Samuel E. Landrum; SEVIER, Jim C. City; UNION, Jacob P. Ellis, George C. Burton; WASHINGTON, John Boyce, Jack Wood, Ruth Lesh. COUNCILORS Eldon Fairley, Paul Gray, Dwight Gray, L. J. Pat Bell, Raymond Irwin, John P. Burge, Kenneth R. Duzan, George F. Wynne, Karlton H. Kemp, James C. Bethel, Robert McGrory, W. Payton Kolb, Morrissey Henry, Henry V. Kirby, C. C. Long, and A. S. Koenig. PRESIDENT Stanley Applegate; PRESIDENT-ELECT Robert Watson, FIRST VICE PRESIDENT Winston K. Shorey; SPEAKER Amail Chudy; VICE SPEAKER Charles F. Wilkins, Jr.; SECRETARY Elvin Shuffield; TREASURER Ben N. Saltzman; PAST PRESIDENTS L. A. Whittaker, C. Lewis Hyatt, H. W. Thomas, Ross Fowler, Joe Verser, Jack W. Kennedy.

The chairman of the Credentials Committee, Ben Saltzman, reported that there were fifty-seven delegates present, and that thirty-nine delegates had registered prior to the opening of the session. The delegates present constituted a quorum.

Upon the motion of Morrissey Henry, the House adopted the minutes of the 95th Annual Session

as published in the June 1971 issue of the Journal of the Arkansas Medical Society.

Speaker Chudy introduced Mrs. G. Prentiss Lee of Portland, Oregon, President of the Woman's Auxiliary to the American Medical Association. Mrs. Lee spoke briefly regarding the AMA Auxiliary. The Speaker also introduced officers of the Woman's Auxiliary to the Arkansas Medical Society — Mrs. Harold D. Langston of Little Rock, President, and Mrs. W. Myers Smith of North Little Rock, President-elect. Mrs. Langston brought greetings from the State Auxiliary.

John R. Kernodle of North Carolina was introduced to the House by Speaker Chudy. Dr. Kernodle was present in his capacity as a member of the Board of Trustees of the American Medical Association and he discussed with the House the aims and programs of the AMA.

J. A. Harrel, Jr., Director of the Arkansas State Department of Health, spoke briefly asking for continued cooperation of the Medical Society in programs of the State Health Department.

Speaker Chudy gave recognition to the secretaries of the county medical societies who submitted the first three annual reports for 1972:

First: Lincoln County Medical Society, Richard C. Petty, Secretary.

Second: Little River County Medical Society, N. W. Peacock, Jr., Secretary.

Third: Lee County Medical Society, Floyd S. Dozier, Secretary.

Speaker Chudy called on the Chairman of the Council for a supplemental report covering meetings of the Council held since publication of the annual report in the Journal.

#### **REPORT OF THE COUNCIL C. C. Long, Chairman**

The Council met on Sunday, March 26, 1972, with representatives of the county medical societies as guests. Business was transacted as follows:

1. The Council voted to authorize payment of expenses by the Society for the out-of-State Eye Section speaker for the 1972 convention.
2. Appointed John Crenshaw to the fourth councilor district position on the Hospital-Insurance-Physician Committee.
3. Gave approval to two proposals which the State Board of Health will present to the 1973 Legislature:

- (A) Authorization of appropriation for minimum salary of \$35,000 and maximum salary of \$40,000 per annum for the Director of the Arkansas Department of Health;
- (B) Appropriation of one million five hundred thousand dollars in the Department of Health's budget to provide all salaries for state and local public health employees within the State.
4. Approved membership for a staff person in the American Society of Association Executives.
5. Approved and adopted the annual report of audit.
6. Heard a report on an insurance company making payments of physicians' claims on a "usual, customary and reasonable" basis without data from physicians on their usual fees and voted to authorize the Society's legal counsel to pursue this matter in court if the occasion arises.
7. Heard a report from the Professional Services Review Organization on its study of the regional fee concept for payment of physicians' claims. It was reported that the PSRO had, on March 22nd, voted on the question with the result being eight in favor of retaining the five regions, seven against retaining multiple regions, and two abstaining. Majority and minority reports from the PSRO were presented. The Council voted to refer the report from PSRO, along with the majority and minority opinions, to the House of Delegates.\*
8. The Council voted an expression of appreciation to the PSRO chairman, Charles Wilkins, and to the Director of Blue Cross-Blue Shield, George Mitchell, for their excellent presentations and their work on the fee structure for Medicare.
9. Voted to grant permission to Mr. Warren to use the Arkansas Medical Society name as the plaintiff in injunction suits in cases involving infringement on the practice of medicine.
10. Voted to take no further action on a suggestion from Union County that members be polled for fee profiles. The Council felt

\*Report published in May issue of Journal, beginning on page 425.

PROCEEDINGS



The Society president, Stanley Applegate, presents check for \$9,900 to the Medical School Dean, Winston K. Shorey, on behalf of the American Medical Association Education and Research Foundation.



John R. Kernodle of North Carolina, a member of the Board of Trustees of the American Medical Association, addressed the House of Delegates on Sunday.



Mrs. Harold D. Langston, 1971-72 president of the Woman's Auxiliary to the Arkansas Medical Society, spoke at the meeting of the House of Delegates on Sunday.



On behalf of the Medical Education Foundation for Arkansas, Robert Watson presents a \$5,000 check to Dean Shorey of the University Medical School.



Members of the House of Delegates in session on Sunday. In the foreground are C. C. Long, Chairman of the Council and AMA Delegate; Purcell Smith, AMA Delegate; John Kernodle of the AMA Board of Trustees; Robert Watson, President-elect; and Gilbert Dean, delegate from Pulaski County.

*cost would be prohibitive for the type of study suggested by Union County.*

*So that the Speaker could refer the matter to a reference committee for full discussion, Chairman Long announced that at its meeting on April 23, 1972, the Council had voted to recommend to the House of Delegates an increase in dues to \$125 annually.*

Speaker Chudy referred the report of the Council to Reference Committee Number Two.

Speaker Chudy called for reports from committees. He announced that reports had been received too late for publication from the Committee on Postgraduate Education and the Committee on Maternal and Child Welfare. The reports were distributed to members of the House and referred to reference committees for consideration. (See pages 8 and 9 for reports.)

Speaker Chudy called on the Chairman of the Constitutional Revisions Committee, Lee B. Parker, Jr., for an addendum to his supplemental report. The original report (published in the Journal) dealt with Constitutional amendments regarding the committees on postgraduate education and medical education. The supplemental report (which was mimeographed for distribution to members of the House) proposed Constitutional Amendments suggested by the Reorganizational Study Committee. The following oral addendum was presented by Dr. Parker:

#### **SUPPLEMENTAL REPORT**

#### **CONSTITUTIONAL REVISIONS COMMITTEE**

*Item #12 of the Council meeting of February 6, 1972, was a suggestion by Dr. Norton that "each councilor district elect a medical student to the Council of the Arkansas Medical Society and its House of Delegates with full privileges to vote, speak and serve on committees". This suggestion was referred to the Constitution Committee.*

*A report from the American Medical Association reveals the following:*

1. *There are 51 State Societies (including the District of Columbia);*
2. *Five have no medical school;*
3. *Four — no information is available;*
4. *Twenty-six do not have special student memberships;*
5. *Fifteen do have special student memberships. One (New Mexico) was to vote in November*

*or December 1971 on student memberships and we do not know the outcome of the vote.*

6. *Of the fifteen having student memberships, four do not allow voting rights, eleven do allow voting rights, and three with no student membership have student delegates with a vote.*
7. *Thus, twenty-seven percent of our State Societies do have student delegates with a vote — the maximum number is seven in Pennsylvania, the minimum is one (in two states). The average seems to be two members. One state (North Carolina) bases the number on one per twenty-five student members.*
8. *Seven state societies (not including Arkansas) are studying student participation.*

*A mail poll of the committee of five members has resulted in four replies. All four replies agree on the following:*

1. *The committee feels that it would be useful to have students involved in Medical Society activities, preferably by a special membership. This could be accomplished by including students in the affiliate membership for interns and residents. (Amend Section 6, Chapter I of By-Laws)*
2. *On the question of dues, there were mixed feelings from none to \$10 per year.*
3. *All four replies agree that affiliate members should have voting privileges. No vote was taken as to whether this should be a specified number or on a sliding scale based on number of members.*
4. *All four replies feel that there should be representation in the House of Delegates and on the Council.*
5. *The chairman would like to recommend that the affiliate membership be allowed two delegates to the House of Delegates and one member on the Council.*

All material from the Constitutional Revisions Committee was referred by Speaker Chudy to Reference Committee Number Three.

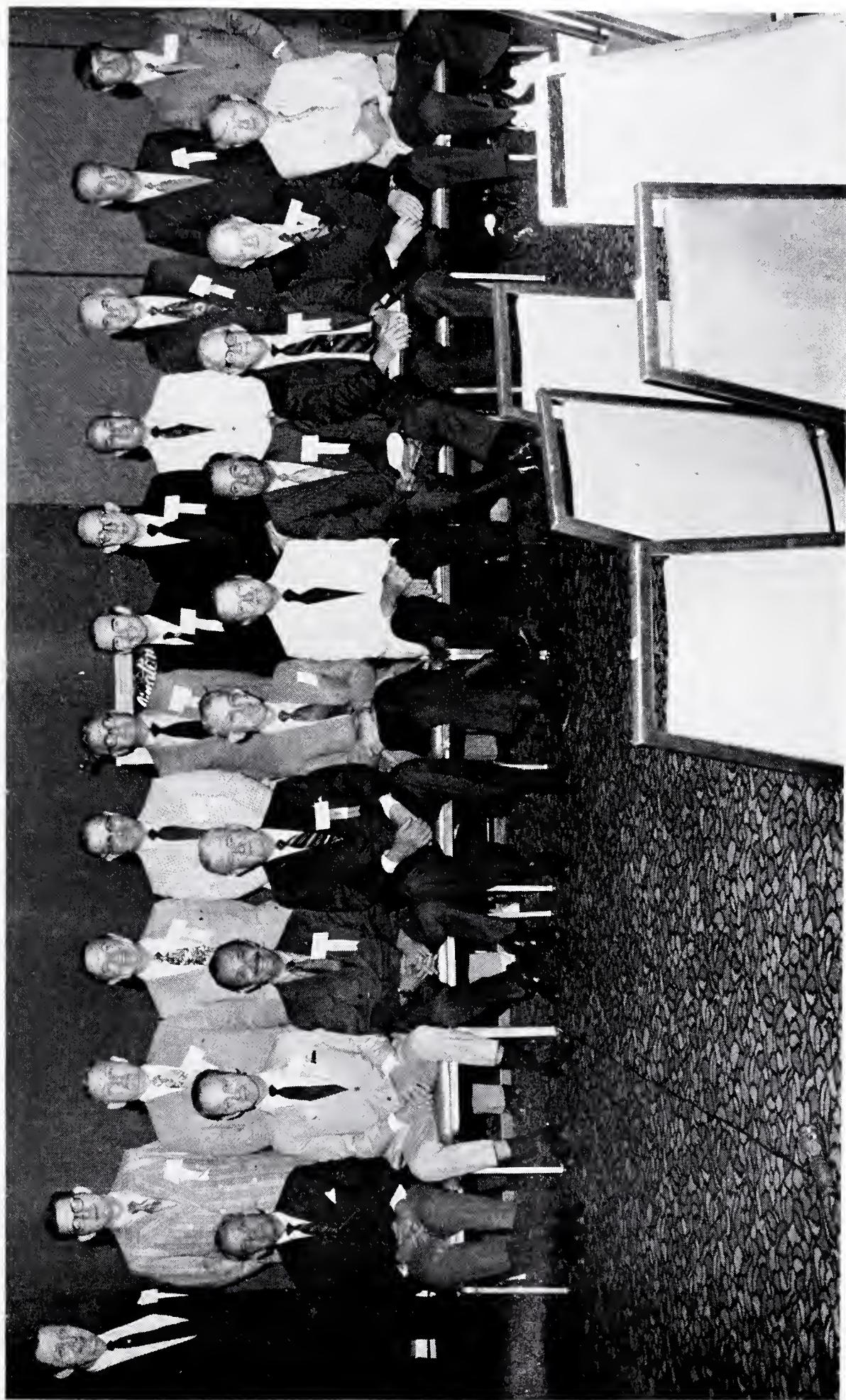
Elvin Shuffield, Chairman of the Legislative Committee, submitted the following report on the activities of his committee.

#### **REPORT OF THE LEGISLATIVE COMMITTEE**

**Elvin Shuffield, Chairman**

*Mr. Speaker, Officers, Delegates, Guests and Members: It is with great pleasure that I can report that the status of the physicians was not*

PROCEEDINGS



Council of the Arkansas Medical Society for 1972-73. Seated, left to right, Robert McCrary, Councilor; James C. Bethel, Councilor; Ben N. Saltzman, Treasurer; Robert Watson, President; John P. Wood, President-elect; C. C. Long, Chairman of the Council; Elvin Shufield, Secretary; Payton Kohl, Councilor; Henry Kirby, Councilor; John P. Burge, Councilor (standing, left to right) Councilors L. J. Pat Bell, Raymond A. Irwin, Eldon Fairley, William S. Orr, Jr., A. S. Koenig, Kenneth R. Duran, Morris M. Henry, Vice Speaker Charles F. Wilkins, Jr., Speaker Amail Clady, Councilors Lynn Harris, Dwight Gray and John E. Bell. Not present were: First Vice President Guy R. Farris, Councilors John B. Kirkley, Paul Gray, J. B. Jameson, Jr., Carlton Kemp.

altered in the recent special session of the Arkansas Legislature. As you know, there were extensive debates, public hearings and several bills presented on drug abuse and under the capable leadership of our attorney, Eugene Warren, we were not involved. These various bills strengthened the enforcement of the criminal aspect of drug abuse and then they fragmented the policing action and enforcement of this drug abuse program.

It is of utmost importance that each of you go home and stress the necessity of getting the doctors of our State to support good candidates for national legislature and state legislature. I urge you to particularly study the races for United States Senate and United States Congress. In the United States Senate race, two men have pledged to support national health insurance, mostly of the Kennedy type. Also, I urge you to study some of these candidates to determine for sure whether their hands will be so tied that they would be unable to represent all people in this State.

On the State level, practically all of our friends have opposition and some of these men have served well on the public health committees of both Houses and they deserve your support personally and financially. We are in a new ball-game as far as elections are concerned. We have been re-districted to where it is near a one man-one vote type of representation and it is going to require a different type of campaigning altogether and all these campaigns will require considerable financial support and there is no better way in getting into close contact with a candidate than to assist him financially and personally.

Fortunately, we have several doctors who have volunteered to serve on the finance committees of some of these candidates and this will certainly be beneficial. Also, I urge you to analyze some of the campaigning that is being done. I have noticed in a few instances where some men are campaigning for state office on national public health and legislative issues. The Arkansas Legislature cannot change or alter any of the HEW laws, rules and administrative decisions, so urge your people not to be misled by false promises along this line.

Our Medical School has become a target of considerable criticism and misinformation. A rather vicious resolution was introduced in the

special session of the Legislature, but fortunately it was so strong in its words and action that it did not receive favorable consideration and a milder version was passed. I would like to urge the opponents of the Medical Center to sit down and try to arbitrate and work out our problems within the family, so to speak, and then all pitch in and work together to try to help the Medical Center grow and achieve greater accomplishments. It is my understanding that Dr. Dennis will explain in detail the needs of the Medical Center and then I think we should all get together and try to work out what is best for the people of this State.

In the last regular session of the Legislature, legislation was passed with all good intentions of trying to accomplish economy and better services for the people, but unfortunately this legislation has not worked at all. What I am referring to particularly is the legislation concerning the operation of our State Medical Board. As you know, the law was passed where the Attorney General was furnished the legal voice for our Board and this is just not practical at all. As you know, the Attorney General only serves from two to four years and he does not have the time to cover this position of serving our Medical Board personally; therefore, he sends some assistant over and, from what I understand, out of the last four meetings, we have had four different attorneys to represent the board.

None of these have had any real experience pertaining to Board problems. Therefore, it is very necessary for us to watch the Attorney General's race very closely and get out the vote to elect the man who will help us straighten out this problem and restore the attorney to the Board. It is my opinion that the Board has been stripped of all of its power and is in a vulnerable position of becoming by-passed by political actions and professional politicians. Also, the way the economy measures have worked out, I am told it cost more now to operate our Board than it did when the Board was permitted to make its own purchases and negotiate supplies and equipment.

Very few people realize that the elections have been moved up. The first primary will be May 30 and then the run-off is June 13, and as you know, these two races will settle most of the offices, but there will be some Republican opposition in several positions.

*We have several men in key positions that are in great need of financial assistance and if there is any question about candidates in your district, I will be happy to discuss them with you, but let me repeat and urge that you go home and go to work, because if you do not, this State is going to lose by default and is going to fall into the hands of a small clique and it will take us years to get out from under the yoke and burden of this group.*

*If there are any questions, I will be happy to answer them.*

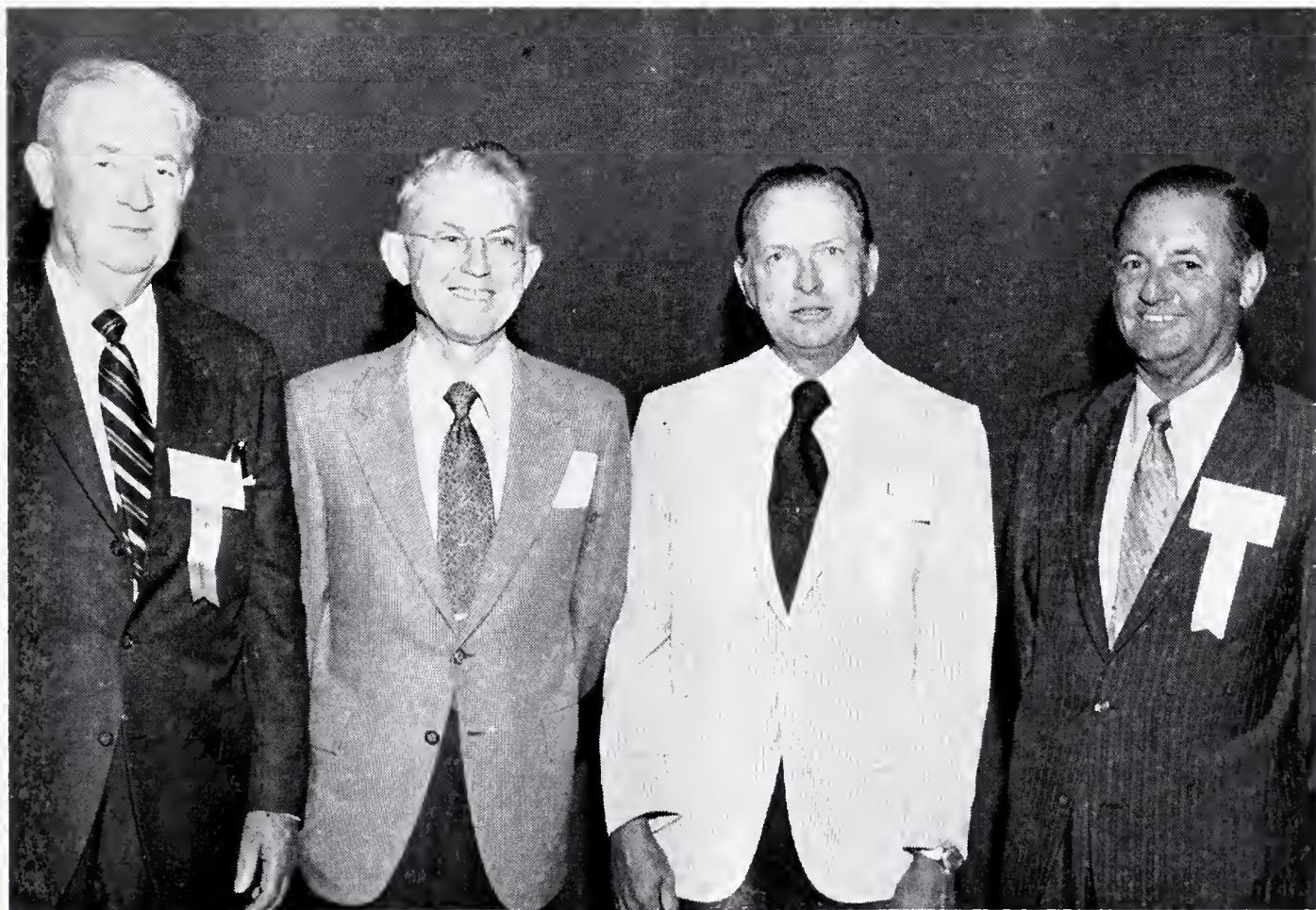
The Legislative Report was referred to Reference Committee Number One. Speaker Chudy expressed the Society's appreciation to Dr. Shuffield and Mr. Warren for their work. The House gave them a standing ovation.

Speaker Chudy announced consideration of old business and called the attention of the House to an item which had been carried over from last year. In 1971, the Pulaski County Medical Society delegation introduced a resolution calling for the State Society to consider the compilation and publication of a membership

directory which would include a photograph of each member, along with pertinent biographical information. The House voted to give further consideration to the proposal at the 1972 meeting and requested that information regarding costs, feasibility, etc., be presented to the House for action at that time. Speaker Chudy reported on the study made by the headquarters office. It was reported that printing such a directory would cost approximately \$4500-\$5000 and that there would be added costs of secretarial time, printing of questionnaire forms, stationery, postage, advertising solicitation, etc. Because of the estimated high cost of the project, as well as anticipated problems in obtaining photographs of members, the House voted to table the matter. Motion was by Lewis Hyatt of Drew County.

Speaker Chudy reminded members of the House that open hearings of the reference committees would be held at 3:30 P.M. and urged all members to attend to participate in the discussion concerning the various reports and resolutions.

Speaker Chudy called on Society President Stanley Applegate. On behalf of the American



Executive Committee of the Arkansas Medical Society for 1972-73 (left to right) Robert Watson, Little Rock, President; John P. Wood, Mena, President-elect; C. C. Long, Ozark, Chairman of the Council; Elvin Shuffield, Little Rock, Secretary.

Medical Association Education and Research Foundation, Dr. Applegate presented a check for \$9,900.89 to Winston K. Shorey, Dean of the University of Arkansas School of Medicine, for the use of the School. The money is contributed to the School for special projects or expenses not provided for in the budget. In accepting the check, Dean Shorey expressed appreciation to the physicians who had contributed to the AMA-ERF to make the grant possible and praised the Woman's Auxiliary for their work on behalf of AMA-ERF.

Robert Watson, representing the Medical Education Foundation for Arkansas, presented to Dean Shorey a check from the Foundation in the amount of \$5,000. Dean Shorey noted that the check would be used with matching funds to make \$45,000 available to the medical student loan fund. The principal source of income for the Foundation is the \$5 of each Society member's dues payment which goes to the Foundation.

Speaker Chudy announced that meetings of all members in the first and fifth congressional districts would be held immediately following adjournment of the House to elect nominees for district positions on the Arkansas State Board of Health and the Arkansas State Medical Board.

Speaker Chudy then announced that the selection of the nominating committee for election of officers for the ensuing year would be made. Delegates from the various councilor districts held meetings on the floor and selected the following nominating committee:

First District: Eldon Fairley, Osceola

Second District: Paul Gray, Batesville

Third District: Dwight W. Gray, Marianna

Fourth District: H. W. Thomas, Dermott

Fifth District: K. R. Duzan, El Dorado

Sixth District: Karlton Kemp, Texarkana

Seventh District: James Bethel, Benton

Eighth District: Curry B. Bradburn, Little Rock

Ninth District: Ruth Lesh, Fayetteville

Tenth District: Charles Wilkins, Jr., Russellville

The first meeting of the House of Delegates adjourned at 2:45 P.M.

## POSTGRADUATE EDUCATION COMMITTEE

### REPORT 1971-72

**Lee B. Parker, Jr., M.D., Chairman**

Two basic programs for postgraduate education for physicians have been provided by the University of Arkansas Medical Center during the past year:

1. Departmental Seminars such as the Family Practice Refresher Course in February and March 1972; the Pediatric seminar on Newborn Care in February 1972; the Surgery symposium in March 1972; and the Urology seminar in May 1971.
2. Regional Medical Program funded project of Continuing Education for Physicians. (Now succeeded by the program entitled Rural Medical Extension Service).

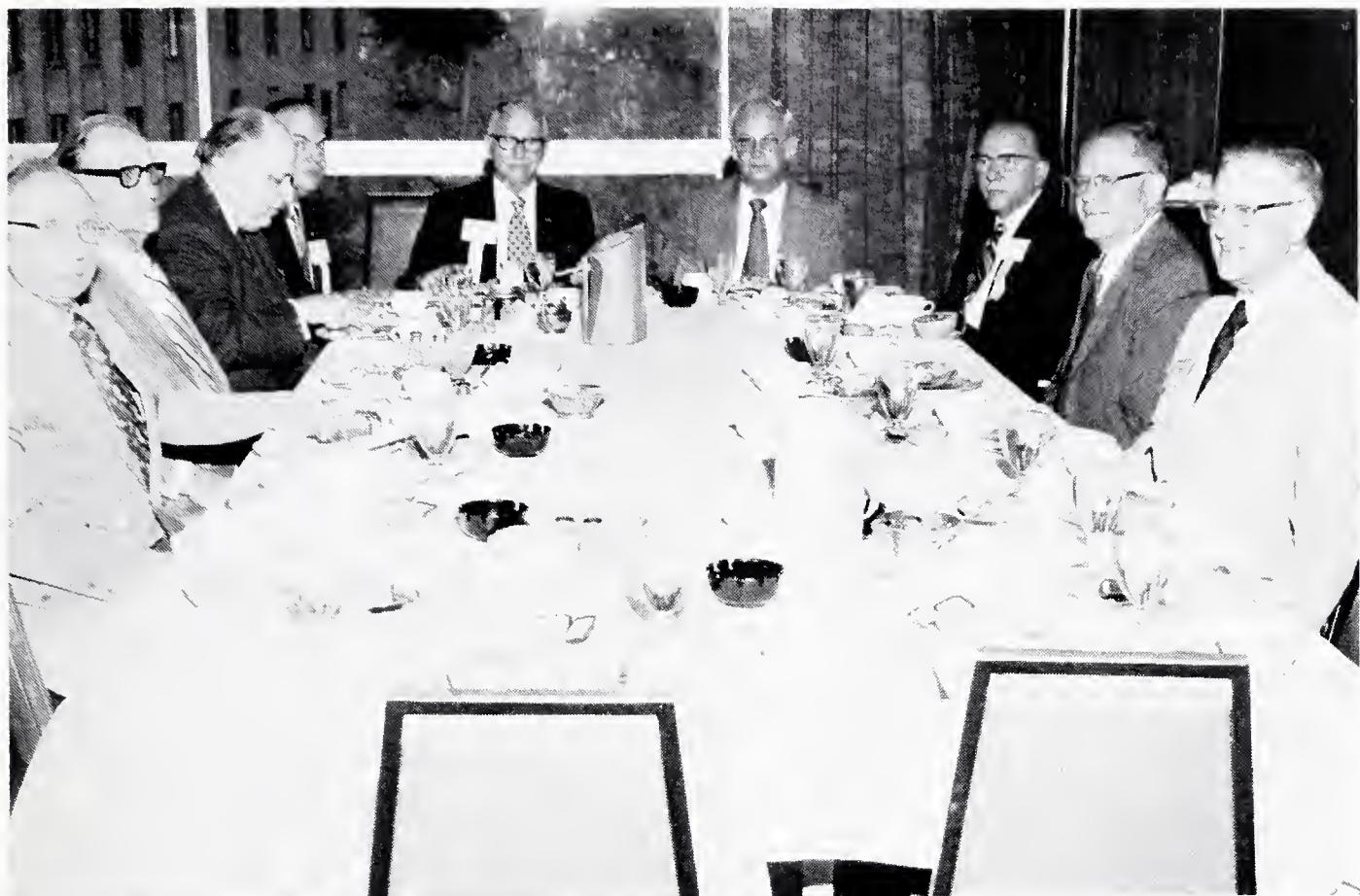
In addition to these programs we have had many other scientific programs presented on a regional or statewide level such as our own Arkansas Medical Society scientific program, the Academy of Family Practice annual scientific sessions, and various specialty group programs such as the Arthritis Foundation seminar, the Arkansas-Oklahoma Cancer Group Meetings, the Heart Association seminars, the tuberculosis seminars by the chest diseases group and others, I am sure.

In addition, I am sure that most physicians in the State have similar experiences as my own in that I receive from one to five announcements of postgraduate educational programs weekly which are being held within this State or in nearby areas.

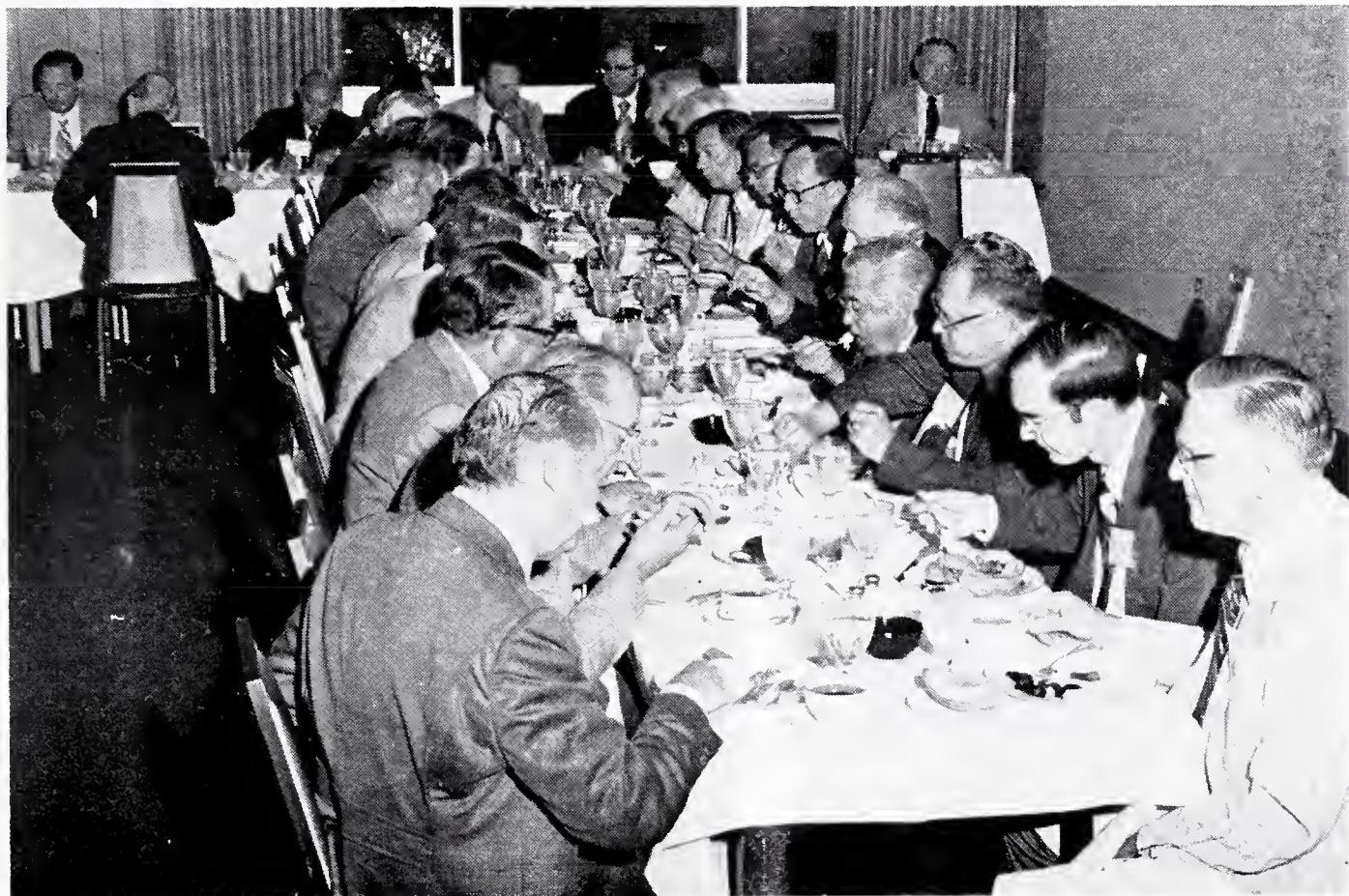
What we are saying, then, is that there are many varied educational opportunities available to the physician who is willing and/or able to get away from his practice. (There is a *possibility* being explored for establishment of a list of University of Arkansas Medical Center house staff who are interested in locum-tenens-type opportunities. This, if accomplished, would allow the local physician to leave, knowing that his practice was covered; that would help to eliminate this difficult situation as a hindrance toward participation in some postgraduate educational opportunities).

The Continuing Education project has been revamped and is now part of the Rural Medical

PROCEEDINGS



Past Presidents H. W. Thomas, Joe Verser, Ross Fowler, T. Duel Brown, Stanley Applegate, L. A. Whittaker, C. Lewis Hyatt, and C. Randolph Ellis at breakfast hosted by the Society on Wednesday, April 26th. Fifth District Councilor George F. Wynne (third from left) was a guest of the group at the breakfast.



The Council of the Society held daily sessions during the convention to consider the many business items presented. C. C. Long of Ozark is Chairman of the Council.

Extension Services project. This new project consists of the following basic activities:

1. Consultation visits by selected specialists to smaller community hospitals and its staff physicians. At the present time, 18 communities are participating and many others have been contacted about participation in this phase of the program. The heart of this part of the program is teaching conferences consisting of in-patient rounds, out-patient consultations and records review.

A coronary care team — consisting of Dr. Malcolm Pearce, a nurse, and an electronics technician is now available for consultation to any hospital or hospital staff desiring expertise in setting up or operating a coronary care unit.

2. Two basic forms of audio-visual programs will also be offered:
  - (a) the Dial Access telephone tape system will continue as it has in the past; (b) the teaching machine program begun on a limited basis will also be continued, hopefully on an improved basis.
3. It is planned to establish a telephone consultation system whereby physicians can call in and request dialog about specific problems and have this request responded to within a reasonable period by a UAMC faculty member. This service will hopefully be available by June or July of this year.
4. It is hoped that an expanded physicians' locator service can be arranged, with the State Society and the Medical Center co-ordinating and cooperating in this service. The locum tenens service would also fall in this category.
5. Co-ordinated efforts are being made to include the Family Practice program in our consultant teaching program by allowing residents to go along on occasional consult visits throughout the state. It is felt that the residents will be able to learn the same as the local physicians, and at the same time allow the residents to investigate the medical practice in various areas of the state.

This program being developed by the Rural Medical Extension Service will be operated by the Medical Center; however, an Advisory Group has been appointed consisting of 5 members

from the Arkansas Medical Society (4 of whom must be family practitioners), 3 members from the Medical Center, the Director of the Regional Medical Program (Dr. Silverblatt), and Dean Shorey. This group is charged with the responsibility of determining the directions and extent of the various activities of the program throughout the state and reviewing the effectiveness of the program. It may also recommend new activities which might serve to improve rural medical services.

It is urged and requested that the Arkansas Medical Society and its individual members continue to assist and cooperate in this program through the Advisory Group and by liaison with the Administrative Staff of the program. Participation and attendance in the various activities of the program are urged.

#### **COMMITTEE ON MATERNAL AND CHILD WELFARE**

**John W. Trieschmann, M.D., Chairman**

The committee in 1971-1972 has entered into the programs and planning stages of two very important programs.

First the appointment of the chairman to the Governor's Advisory Committee for Family and Children's Services has allowed a great deal of input into the programs that have been generated out of the state and Federal welfare departments. The areas of adoption, un-wed mothers, day care, child abuse, and delinquency are receiving task-force-type attention. The new guidelines for day care received our closest scrutiny and we have found our advice well received.

Since October 1971 a state-wide task force on child abuse was created through Dr. Loyd Young at the Medical Center. Our committee has worked closely with this group in developing regional centers for handling child abuse cases. A highlight of this adventure was a state-wide seminar on March 24th and 25th which, in the name of the Arkansas Medical Society, we helped to sponsor.

We feel that with the legislative session just ended and the increase quantity of funding in the area of maternal and child health, it will require our ever-continuing role to provide professional advice and direction.

**SUPPLEMENTAL REPORT  
COMMITTEE ON CONSTITUTIONAL REVISION**

**Lee B. Parker, Jr., M.D., Chairman**

In January 1972 it was brought to our committee's attention that the State of Arkansas can now license foreign medical graduates by examination. The present Society constitution does not allow such graduates to become members of the Society.

At present Article 4, Section 2, states:

"Only such person is eligible for active membership in a component society as (1) possesses the degree of Doctor of Medicine, issued by a medical school which at the time such degree was conferred was approved by the Council on Medical Education and Hospitals of the American Medical Association, and (2) holds an unrevoked license to practice medicine and surgery issued by the Board of Medical Examiners which consists of members recommended by this Society".

In a mail poll of our committee the following change is recommended:

1. Delete Section 2, Article 4 as written.
2. Insert the following paragraph in its place:

"Only such person is eligible for active membership in a component society as possesses the degree Doctor of Medicine and holds an unrevoked license to practice medicine and surgery by the Board of Medical Examiners which consists of members recommended by this Society".

In February 1972 the report of the Organization Review Committee was received and transmitted by mail to the members of our committee and the following comments for possible action are made for the information of the Delegates and action by the reference committee:

Suggestion 1A and 1B — No action required by our committee.

Suggestion 2 — To amend the constitution to require Councilors to submit a written report of the activities within their district to the Council for publication in the Journal.

The Constitution Committee tends to agree with this recommendation. The chairman believes that perhaps Councilors should be required to submit reports of district activities to the Council but he also feels that it is even more important that the Councilor submit reports to the members in his district of activities of the

Council. (He knows that Council activities are reported in the Journal but unfortunately too many members do not read these reports). Such reports could be written or verbal, especially if Suggestion 3 is adopted.

Suggestion 3 — Would amend the constitution to require the holding of councilor district meetings at specified times or intervals. (There was no suggestion as to what interval should be selected).

Our committee was divided in its reaction to this suggestion. "There are too many meetings already" seemed to be the major complaint. The chairman feels that such meetings *could* be useful and believes that it would be relatively easy to combine or drop the district's county society meetings for the months of May or June and October or November and have a councilor district meeting in their place. If a winter session of the House of Delegates is held, such councilor district meetings should be held the month before or the month afterward.

Suggestions 4, 5, 6, and 7 required no action by our committee.

Suggestion 8 — Would make each vice president eligible for re-election and would increase the responsibilities of the vice presidents by assigning a number of the committees of the Society to him for his stimulation, guidance, and liaison.

Our committee can find little fault with this suggestion. The chairman feels that no amendment would be required in order to re-elect the vice president if so desired. The vice president, speaker and vice speaker are all referred to in Article 9, Section 2, as being elected to one year terms and the speaker and vice speaker have usually been re-elected to succeed themselves, why not the vice presidents?

Chapter VI, Section 3, would be amended by adding the following statement:

"The vice presidents may be assigned as ex-officio members of certain committees of the Society by the President. The vice president's responsibilities will be to stimulate, to guide, to maintain liaison, and to otherwise assist the assigned committees and their chairmen in the performance of their activities. The vice president (shall or shall not) have a vote in the committee assigned".

Suggestions 9, 10, 11, 12, 13, and 14 required no action by our committee.

# SCIENTIFIC SESSIONS

The First Vice President of the Society, Winston K. Shorey of Little Rock, presided at the scientific session on Monday morning. The program opened with "Grand Rounds", presentation of case and discussion. A panel consisting of Robert S. Abernathy, Professor and Chairman of the Department of Medicine; Marvin L. Murphy, Associate Professor of Medicine; Gilbert S. Campbell, Professor and Chairman of the Department of Surgery; and David L. Barclay, Professor and Chairman of the Department of Obstetrics and Gynecology; University of Arkansas School of Medicine, discussed "Thromboembolic Disease". "Pre-Marriage Conferences for Engaged Couples Sponsored by a Medical Society" was the topic of discussion for Alice Baker Holoubek of Shreveport. Joe E. Holoubek of Shreveport addressed the session on "Medical Society Sponsored Physician and Clergy Programs". A paper on "Emergency Care of Critical Musculoskeletal Injuries" was presented by Donald K. Kettelkamp, Professor and Chairman of the Division of Orthopedic Surgery at the University of Arkansas Medical Center. William A. Sodeman, Jr., Associate Professor of Medicine at the University of Arkansas School of Medicine, discussed "Ambulatory Management of Peptic Ulcer". The morning session ended with a paper on "Management of Pulmonary Emphysema" by Joseph H. Bates, Professor of Medicine at the University of Arkansas School of Medicine.

Scientific lectures resumed Monday afternoon with the Second Vice President, Lee B. Parker, Jr., of Fayetteville, presiding. The first talk was on "Diagnosis and Treatment of the Ills of a Medical School" by James L. Dennis, Vice President for Health Sciences, University of Arkansas. Robert E. Merrill, Professor and Chairman of the Department of Pediatrics of the University of Arkansas School of Medicine, spoke on "Management of Diarrhea in Children". Jack E. Mobley, Professor and Chairman of the Division of Urology at the University of Arkansas Medical Center, addressed the session on "Management of Urinary Tract Infections". James E. Doherty, Professor of Medicine at the University of Arkansas School of Medicine, discussed

"Management of Cardiac Failure". Winston K. Shorey moderated a panel presentation on "Malpractice". Members of the panel were Attorneys William A. Eldredge, Jr., Alston Jennings, and Branch T. Fields, all of Little Rock, and Harry Hayes, Jr., Little Rock, Chairman of the Medical Society Committee on Insurance.

Roy I. Millard, Russellville, Third Vice President, presided at the scientific session on Tuesday morning. The first speaker was Francis M. Henderson, Director of the Arkansas Health Systems Foundation, who spoke on "Experimental Health Delivery Systems in Arkansas". The next presentation was on "Management of Chronic Renal Disease in Arkansas" by William J. Flanigan, Director of the Comprehensive Kidney Program in Arkansas. "Appendicitis: How Can the Radiologist Help in Making the Diagnosis?" was discussed by J. T. Ling, Professor and Chairman of the Department of Radiology, University of Louisville School of Medicine.

Francis E. LeJeune, Jr., Chairman of the Department of Otolaryngology of Ochsner Foundation Hospital, New Orleans, spoke on "The Significance of a Lump in the Neck". "Intrauterine Diagnosis of Congenital and Genetic Abnormalities" was the topic of discussion for Jean A. Cortner, Professor and Chairman of the Department of Pediatrics, State University of New York at Buffalo.



Members of the Society enjoyed a cocktail party at the Vapors on Monday as guests of Arkansas Blue Cross-Blue Shield.

# RELATED MEETINGS

## TUMOR CLINIC

The Association of Tumor Clinic Staff Members in Arkansas met on Monday in the Arlington Hotel with Robert L. Glass of Columbia, Missouri, as guest speaker. Association Chairman Thomas E. Bell presided.

## EYE SECTION

The Eye Section of the Society met at 9:00 A.M. on Tuesday with the following speakers: David Paton, Houston; Roger Bost, Little Rock; Mayne Parker, Little Rock. A luncheon and business session followed the scientific program.

## EAR, NOSE AND THROAT SECTION

The Ear, Nose and Throat Section met for a luncheon session on Tuesday with Francis E. LeJeune of New Orleans as speaker.

## RADIOLOGY

The Arkansas Chapter of the American College of Radiology held a luncheon meeting on Tuesday. J. T. Ling of Louisville presented a scientific lecture.

## PEDIATRICS

The Arkansas Chapter of the American Academy of Pediatrics held a luncheon meeting on Tuesday and met jointly with the Arkansas Society of Obstetricians and Gynecologists for a scientific program. Speakers for the program were Jean A. Cortner, Buffalo, New York; Maxwell R. Baldwin, Florence Char, David Barclay, and Robert E. Merrill, all of Little Rock.

## OBSTETRICS-GYNECOLOGY

The Arkansas Society of Obstetricians and Gynecologists met for luncheon and a business session on Tuesday, then joined the pediatricians for a joint scientific program.

## ANESTHESIOLOGY

William C. North of Memphis was guest speaker for a session of the Arkansas Society of Anesthesiologists held at 3:30 P.M. on Tuesday afternoon.

## PATHOLOGY

The Arkansas Society of Pathologists met for luncheon and a business session on Tuesday.

## INTERNAL MEDICINE

The Arkansas Society of Internal Medicine held a luncheon and business meeting on Tuesday.

## UROLOGY

The Urology Section of the Arkansas Medical Society held a luncheon meeting on Tuesday.

## ARKANSAS ACADEMY OF FAMILY PRACTICE

The Board of Directors of the Arkansas Academy of Family Practice met for luncheon Tuesday. At 2:00 P.M. that day, a program session was sponsored by the AAFP with James L. Dennis of Little Rock as speaker.

## ORTHOPAEDICS

The Arkansas Orthopaedic Society met on Tuesday at the Hot Springs Rehabilitation Center with Lee Thomas Ford of St. Louis as speaker.



Mrs. Gordon P. Oates and James C. Bethel chat at the cocktail party on Tuesday evening.

# OTHER ACTIVITIES

The Council of the Society hosted a reception on Sunday evening for all members of the Society and their guests. Attendance was very good at the reception. Members enjoyed visiting with their colleagues.

On Monday evening, members of the Society were guests of Arkansas Blue Cross-Blue Shield for a cocktail party at the Vapors Supper Club. Members then enjoyed a dinner at the club.

The Society hosted a luncheon on Monday for senior medical students at the University of Arkansas Medical School. The senior students had been extended a special invitation to attend the scientific lectures on Monday. The luncheon afforded the students an opportunity for information discussion with members of the Society.

The Society hosted a breakfast for members of the Fifty Year Club on Tuesday, April 25th. The following members of the club were present: G. C. Coffey, W. K. Smith, Mac McLendon, D. L. Owens, T. H. Jones, C. W. Hall, R. H. Whitehead, D. W. Goldstein, J. H. McCurry, D. B. Stough, E. M. Gray, C. W. Jones, E. J. Chaffin, G. Allen Robinson, J. W. Butts, and T. N. Black. C. E. Gray was a guest of the club for the breakfast. Charles W. Silverblatt, Coordinator of the Arkansas Regional Medical Program, was guest speaker. D. B. Stough of Hot Springs was named president and W. K. Smith of Hot Springs was selected as president-elect. G. Allen Robinson of Harrison was named the new secretary. J. H. McCurry, who served many years as secretary, was named "President Emeritus".

The Society hosted the past presidents at a breakfast on Wednesday morning. In attendance were: H. W. Thomas, Joe Verser, Ross Fowler, T. Duel Brown, Stanley Applegate, L. A. Whitaker, C. Lewis Hyatt, C. R. Ellis and guest George F. Wynne.

A poolside cocktail party preceded the inaugural banquet on Tuesday evening.

## PRESIDENT'S INAUGURAL BANQUET

The President's Banquet was held on Tuesday evening, April 25th, in the Ballroom of the Arlington Hotel with the Society president, Stanley Applegate, presiding. Invocation was by Randolph Ellis of Malvern.

President Applegate introduced those seated at the head table as follows: Winston K. Shorey, Little Rock, Chairman of the Convention Committee; Mrs. Shorey; Elvin Shuffield, Little Rock, Secretary of the Society; Mrs. Shuffield; Mrs. Applegate; Martin Eisele, Hot Springs, Chairman of the Convention Social Committee; Mrs. Eisele; C. C. Long, Chairman of the Council of the Society; Mrs. Long; Mrs. Watson, and Robert Watson, president-elect.

Other special guests introduced by President Applegate were: Mrs. Deany Reid, President of the Arkansas State Chapter of the American Association of Medical Assistants; Mr. John Downes of the Mountain Valley Water Company.

President Applegate extended thanks to Mrs. Louis K. Hundley for her work on decorations for the banquet.

President Applegate called on Charles W. Logan, Exhibits Chairman, for presentation of certificates for winning exhibits. Placing first in the exhibit awards was the exhibit on "Hoarseness" by A. J. Brizzolara and H. L. Rounsville of Little Rock. "Fingertip Amputations" by the Little Rock Orthopedic Clinic (R. Barry Sorrells, Kenneth G. Jones, and H. Austin Grimes) placed second and the third winner was the Department of Ophthalmology at the University of Arkansas School of Medicine (F. T. Fraunfelder, Calvin Hanna, and Mayne Parker) for their exhibit on "Spheroidal Degeneration". Honorable mention went to the exhibits of Charles Pearce of Shreveport and the Department of Surgery of the University of Arkansas Medical Center.

President Applegate addressed the group as follows:

## ADDRESS OF THE PRESIDENT

*As your president this past year, I have traveled thousands of miles in the State and to meetings outside the State. I have visited many of your county medical societies and apologize to the many that I was unable to visit.*

*It has been a very interesting and educational experience. The two things that I am impressed with most are the determination of the Federal Government to have a National Health Program,*

## PROCEEDINGS



1972-73 Officers of the Woman's Auxiliary to the Arkansas Medical Society. (Standing, left to right) Mrs. W. Myers Smith, North Little Rock, President; Mrs. A. S. Koenig, Fort Smith, President-elect; Mrs. Asa Crow, Paragould, Mrs. George Roberson, Pine Bluff, and Mrs. Robert Nunnally, Gurdon, Vice Presidents; Mrs. James C. Bethel, Benton, Recording Secretary; Mrs. Harlan Hill, Little Rock, Treasurer; Mrs. Kemal Kutait, Fort Smith, Ark-Map Editor, and Mrs. Warren S. Riley, El Dorado, Chaplain.



The Woman's Auxiliary to the Arkansas Medical Society in session on Tuesday, April 25th.



The past presidents of the Auxiliary held a breakfast meeting on Tuesday. In attendance were (seated, left to right) Mrs. Paul C. Schaefer (Honorary Member); Mrs. John McCullough Smith, Little Rock; Mrs. Frank Padberg, Little Rock; Mrs. Hershel Wilmeth, Nashville; Mrs. James W. Branch, Hope; Mrs. Lynn Harris, Hope; Mrs. C. W. Jones, Sr., Benton; Mrs. Mason G. Lawson, Little Rock; Mrs. Art Martin, Fort Smith; Mrs. C. E. Kitchens, DeQueen; Mrs. A. A. Little, Texarkana, and Mrs. Jack Kennedy, Little Rock; (standing, left to right) Mrs. Paul Gray, Batesville; Mrs. Carl Parkerson, Hot Springs; Mrs. Gordon P. Oates, Little Rock, and Mrs. J. B. Crawford, Little Rock.

and the lethargy of the doctors to become involved and take an active part in politics.

I was appointed by Senator John McClelland to be one of the delegates from Arkansas to the White House Conference on Aging. I attended this great staged show where Chairman Flemming had all the delegates play the bit parts and go through their actions and then President Nixon came on as the star and promised that all the problems which had been brought up at the conference would be settled if he continued to be President. This will come about and the next step is to extend the coverage of Medicare and Medicaid where all the expenses of these programs will be covered, including prescription drugs, glasses, dentures, walkers, crutches and other equipment if ordered by a physician. After this will come a program for National Health Care for Everyone and every effort will be made to administer this care through some sort of Health Maintenance Organization which means that if you do not have a large group practice set up and try to make it as a solo practitioner, you are out.

This brings me to the visits with the many county societies. The apathy and lethargy of most of the doctors are frightening. I concede that there are a few that are very aware of the situation and are active, doing what they can in support of politicians, but the majority are tending to their practices and being taken to the pens for slaughter. This is exemplified by the relatively small number of physicians who have paid their membership dues to Ark-Pac and AMPAC, and the even fewer number who have responded with financial contributions to candidates who would be sympathetic to the medical profession and its problems.

If we want good laws written, laws which are for the benefit of our patients and laws which we can practice and live with, it is up to us to have politicians who will listen and counsel with us and not write legislation that is for votes and to hell with the patients, taxpayers and physicians.

On several of my trips to county society meetings, I took Arkansas State Senator Dr. Morriss Henry. Dr. Henry, as many of you know, is a very well trained ophthalmologist practicing in Fayetteville. Four years ago, he ran for—and won—the race for legislator from Fayetteville. Two years ago, he ran for—and won—the race

for State Senator from that district, so he has had experience in the House and Senate—and let me say here that if the Medical Society had not had a friend like Dr. Henry on the hill, we would have been in far worse trouble than we are. Incidentally, Dr. Henry is running for the Senate again right now and has a very active opponent and can use all the help he can get.

One thing which Dr. Henry told me while we were traveling that stuck with me most was about one of his friends in the Senate. This colleague went along with Morriss most of the time, but on one vote involving chiropractors, the colleague voted for the chiropractors and when Dr. Henry asked him why, he replied: "The chiropractors are my friends, my campaign manager is a chiropractor and he raised \$15,000 for my last campaign". Whether we like it not, a politician determines who his friends are by the support he gets during a campaign.

Another point that Senator Henry pointed out, that I did not know, was that you can give a politician any amount of money before any election during the campaign and this is considered support and is legal. If you try to give them money after the election, this is bribery and is illegal.

I am urging, I am begging, I am pleading for you and your families to get involved now—during the campaign—and before the election and before it is too late.

One other point on this subject. This past Thursday, I addressed the Arkansas Pharmaceutical Association in this very room. I visited with them at their cocktail party and their banquet and I feel like I can talk their language for my grandfather, my father, all my uncles, my brother, and my cousin are druggists and I learned from the retail druggists of Arkansas that they are very anxious to get involved in politics with the physicians, they want to work with us for our aims are mutual. I think this is wonderful and I cannot imagine a stronger political force than the pharmacists, the physicians, and our allied professions—dentists, hospital personnel, right on down the line. What a great team we could be. Think about it, then do something about it.

In closing, I want to thank our Executive Vice President, Paul Schaefer, and his most competent staff, the members of the Executive Committee, Cliff Long and all the members of the Council

*who have given so unselfishly of their time to transact the business of your society, Elvin Shufield and Eugene Warren for the days that they have spent at the Capitol during the regular session and the special sessions of the Legislature, and all the working members of the Arkansas Medical Society. Thank you for allowing me to be your president.*

President Applegate read the names of living past presidents and asked those present to stand and be recognized. In attendance were: T. Duel Brown, Little Rock; H. King Wade, Jr., Hot Springs; Joe Verser, Harrisburg; C. R. Ellis, Malvern; C. Lewis Hyatt, Monticello; L. A. Whittaker, Fort Smith; Joseph A. Norton, Little Rock; H. W. Thomas, Dermott; Ross Fowler, Harrison; and Jack Kennedy, Little Rock.

Dr. Applegate administered the oath of office of the president of the Arkansas Medical Society to Robert Watson of Little Rock. In presenting the gavel to Dr. Watson, Dr. Applegate made the following comments:

*This part of the program is the happiest part of the entire convention for me . . . it is turning the gavel over to a fine gentleman, a doctor who is a leader in his specialty, a person devoted to*

*the profession and a president who was wisely chosen and will be a tribute to the Arkansas Medical Society. Dr. Robert Watson of Little Rock, Arkansas, Bob, may the Lord look on you with kindness and favor.*

In accepting the office of president, Dr. Watson made the following remarks:

#### PRESIDENT'S ACCEPTANCE SPEECH

Dr. Applegate, members and guests of the Arkansas State Medical Society, Ladies and Gentlemen:

I wish to express my sincere appreciation to each of you for this honor of having been elected as President of the Arkansas State Medical Society.

I have an ever-increasing awareness of the responsibility associated with this honor. I expect to serve you and the medical profession well, and in a manner of which I will be always proud. Especially, I want to thank Dr. Stanley Applegate, the members of the Executive Committee, the members of the Council to the Society, and our Executive Vice-President and his office personnel.



Members of the Fifty Year Club were guests of the Society for breakfast on Tuesday morning. Present for the breakfast were: G. C. Coffey, W. K. Smith, Mac McLendon, D. L. Owens, T. H. Jones, C. W. Hall, R. H. Whitehead, Guest Speaker Charles W. Silverblatt, Davis W. Goldstein, J. H. McCurry, D. B. Stough, E. M. Gray, C. W. Jones, E. J. Chaffin, G. Allen Robinson, J. W. Butts, and T. N. Black. Mr. C. E. Gray was a guest of the club.

I want to thank the other members of my own office group for their graciously having shouldered many of my working responsibilities, that I can now better serve our State Medical Society during this coming year.

Most of all, I want to, at this time, express to my wife my sincere appreciation to her for her loyalty to me and to the medical profession over the years, and for her continued stimulus to prompt me to better serve my patients and my Medical Society responsibilities.

Undoubtedly, tonight will always be for me one of the greatest moments of my lifetime. It is a joy that I can see before me the faces of so many good friends and close acquaintances of many years, and it is to you that I owe this honor, and to you that I express my true appreciation. I could not be here tonight in this position but for your long-standing friendship and loyalty.

I realize that we are all here in anticipation of a pleasant social evening, and that we are all anxious to again hear Hildegarde, remembering the many obstacles that she overcame last year, endearing herself to all of us.

However, I would be amiss and guilty of true negligence toward the responsibilities of my new office if I did not take a few minutes of your time for a few serious comments.

Forty years ago I passed through Hot Springs, on my way to Little Rock to begin my freshman year in medical school. At that time, our country was in the beginning of a great social revolution. At that time, our country was in the most serious state of depression we have ever known. Banks were closing by the hundreds each week; one of every four able-bodied adults was unemployed, and everywhere throughout our whole economic structure there were signs of collapse.

Forty years later that red-headed medical school freshman of other years, who then respected few social restrictions, has now changed into a white-headed and mature man; and that social revolution of meager beginning some forty years ago continues to gain momentum in cyclonic proportions. Where it will lead us to, no one knows.

For example, the Social Security Act had its beginning at about that time, and then it seemed mild and innocuous. It represented a tax of only one per cent from the employer and one per cent from the employee on the first \$3,000.00 of his earnings. This maximum of \$30.00 or less

a year taken from his pay at that time caused little concern to an average individual.

Federal income tax at that time was at the rate of 4 per cent of taxable income on the first \$10,000.00 earned. Few people in Arkansas at that time earned as much as \$20,000.00 a year, and a net taxable income of \$20,000.00 a year at that time caused a tax charge of only \$1,700.00. Also, at that time, about the only federal employee we saw was someone connected with the postal service. Since then, Social Security taxes and federal and state income taxes have doubled, and doubled, and re-doubled, and continue to rise, just as the social revolution beginning some forty years ago continues on with ever-increasing momentum.

Each day, everything we see, everything we say, everything we touch, and everything we do, is all affected by the heavy hand of the Federal Government. Even our presence here tonight and how we spend this evening will ultimately be reflected in that 1040 form we will have filled out about this time next year, the form wherein we subtract line 15a from line 14, and then enter the result on line 35. You will recall that this is the form said by some to be so simple that a fifth grade student could complete it.

Throughout our country, there are those both in the framework of our Federal Government and those outside this framework who are willing and eager to attack and alter the manner in which we, as physicians, administer to our fellow man. In the present session of Congress, there have been offered more than 2,000 pieces of legislation, and in our state legislative sessions over the country, an additional 2,000 bills have been proposed, representing directives, limitations, and unyielding guidelines as to how we should practice the art of medicine. Among these many bills are measures that would literally change medical institutions into medical supermarkets and would change the physician into a regimented provider of health care, a health attendant, if you may, an automated physiological robot, void of either conscience or compassion, and a eunuch in respect to using any freedom of judgment.

There are those who choose to totally take from the physician every vestige of self-judgment and self-initiative for the manner in which he administers medical care to his patients.

PROCEEDINGS



The "incomparable" Hildegarde entertained at the banquet on Tuesday and was warmly received by those present.

We have all seen a few of the copies of some of the proposed legislation through which innumerable unyielding dictatorial phrases appear, such as "providers would receive certificates of compliance that could be revoked should the provider violate the standards developed by the Commission;" or, "this would be applicable only when the providers possessed certificates of compliance;" or, here is one that speaks for dubious sound business practices, "a payment could not exceed 95 per cent of estimated cost provided through existing systems."

A recitation of innumerable such proposals taken from these more than 2,000 bills now before Congress could go on indefinitely.

But fortunately, we live in a democracy, and fortunately, in a democracy, major change comes slowly. This, in itself, offers some reassurance.

However, despite its many shortcomings, our country is still the finest country in the world in which to live, and our doctors still provide our patients with the best health care obtainable anywhere in the world.

A few years ago, in London, I talked with a relatively young surgeon who was lamenting the fact that in the hospital where he worked, he was third man in the line of ascension on his service. He stated he could never gain any medical independence until he had waited out the death of his two superiors. My answer to him was that in our country, if we are dissatisfied with our place in medicine, we may simply go down the street, so to speak, and open our own office.

He acted shocked and appalled at such a suggestion, stating to me, in effect, that for him to try to practice surgery independently elsewhere would cause him to "starve to death." Then he made the most shameful admission in saying, "you know there is safety in mediocrity." I want to repeat what he said, "you know there is safety in mediocrity."

When I saw him again some six years later, he was still basking in the safety of mediocrity, though a bit threadbare in appearance.

In Russia a few years ago, a high-ranking surgical specialist told me he was still living in a single room as he had as a medical student some twelve years earlier. He stated this was because he had remained single, and that as a single man, he had no justification for more spacious living quarters. It was interesting to me to learn at

that time that there were more neurosurgeons in Little Rock than there were in Moscow, and that either in Memphis or in Houston there were more Board trained neurological surgeons than in the whole of Soviet Russia.

We still live in the best country in the world, and we still provide our patients with the finest medical care in the world. However, we must continuously be on guard and not let others, nor must we let ourselves, destroy this way of medical practice.

From 1936 to 1939, Spain was torn by civil war. For three years the capital of Madrid was repeatedly under attack, and finally, after 28 months of continued siege, it eventually fell to insurgent forces.

Shortly before the surrender of Madrid, General Emilio Mola, in despair, sent the following message to his government: "We are being attacked by four columns from the outside and by a fifth column from within." This was the beginning of the notorious phrase, "fifth column."

Presently, we also have in our country five columns poised to destroy the private practice of medicine. However, we cannot point an accusing finger at others, for we, as physicians, primarily are to blame.

In listing these five columns, we might look upon the first as being that of complacency. We are too satisfied with the status quo. We take the attitude that all is going well. We simply accept medicine as it is, and we offer no voice nor protest to protect it.

The second column is that of indifference. We are apathetic regarding matters of medical responsibility, and when faced with responsibility, we react as one gorged on Miltown.

The third column is that of selfishness. We think only of ourselves. We refuse to share our time in outside efforts for the betterment of others. We show no concern for civic responsibility. We have the time and rationalized justification for a trip to Nassau or Las Vegas or Aspen, but we have not found time to attend a state medical meeting for years.

The fourth column is that of lethargy. It stems from the previous three states. We are too lazy to read, too lazy to write, and we are too lazy to give thought to, or to express ourselves regarding matters of medical concern for our survival.

## PROCEEDINGS



There was a large turnout for the reception hosted by the Council on Sunday evening.



Members enjoyed dinner and dancing at the Vapors Supper Club on Monday evening.



The newly-installed president, Robert Watson, addresses the membership at the Inaugural Banquet on Tuesday.

Affluence compounds our lethargy. A bit of austerity might be of therapeutic benefit.

What I have said here this evening will offend no one, for those who might take offense feel no responsibility to participate in the activities of our State Medical Society, and others will never read what I have said tonight, for should it be printed in our State Medical Journal, few even bother to read the Journal.

I feel that the fifth column, however, is the most harmful of all; that is the defeatist attitude that "they are going to make us do it, anyway, so maybe we should go along with them and try to salvage what we can."

I compare such thinking to a situation in which someone threatens to shoot your wife, and you follow the reasoning that probably it might be better for you to shoot her, yourself, hoping the wound you inflict will be less lethal.

We all tend to disregard the fact that only we physicians can provide health care. Senators and congressmen and saprophytic bureaucrats and health planners with beards and curls cannot provide direct health care. Only doctors are able to treat the sick and afflicted.

No health venture can succeed without the physical presence and moral support of the physician. Our government is trying to solve innumerable health problems, but it cannot successfully solve them without the help and support of our doctors.

We must be ever mindful of these five columns just given, five states of mind, representing possible causes for our own defeat; and, instead, we must, with a constructive voice, speak up and make ourselves heard by our national and state legislatures. Again, we must continuously bear in mind that this is an election year. Much concern prevails in our United States Senatorial and Congressional races, and in our State senatorial and State representative races. These men who are in office and these men seeking to be elected are ready to hear us, and they will listen to us. It is our responsibility to make ourselves heard. Otherwise, without our help and without our voice, these men may create some legislative monstrosity with which neither the public nor the practicing physician can live.

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Past President H. W. Thomas asked for a deviation from the regular proceedings to make a presentation. Dr. Thomas placed around Dr.

Watson's neck a turkey gobbler's "beard" held by the base of a spent shotgun shell and suspended on a white silk ribbon. Dr. Thomas presented to Dr. Watson a scroll which he read as follows:

"THE MYSTIC ORDER OF WILD TURKEY HUNTERS, IN RECOGNITION OF DEMONSTRATED PROWESS IN STALKING AND BAGGING THE MAJESTIC WILD TURKEY GOBBLER, DOES HEREBY DECLARE DR. BOB WATSON A KNIGHT IN THE ORDER OF WILD TURKEY HUNTERS. SIGNED, B. GOBBLER AND BLUE JOHN."

Dr. Watson presented to Dr. Applegate a plaque expressing the appreciation of the Society for his service to the medical profession and to the people of Arkansas.

Dr. Watson introduced Hildegarde, who entertained the banquet guests with an outstanding show. This vivacious, talented singer-pianist captivated the audience. The Society is indebted to Mountain Valley Water Company for making her performance possible.

The hotel orchestra played for dancing in the ballroom following the banquet.

#### **MEMORIAL SERVICE**

A joint Memorial Service of the Arkansas Medical Society and the Woman's Auxiliary to the Arkansas Medical Society was held on Tuesday, April 25, 1972, in the Ballroom of the Arlington Hotel. The president of the Society, Stanley Applegate, presided.

Invocation was by the Reverend Fred Arnold of Oaklawn United Methodist Church of Hot Springs.

Mrs. Paul Gray, soprano, sang "At the River" by Copeland. She was accompanied by Mr. Herman Hess.

#### **MEMORIAL ADDRESS**

##### **George F. Wynne**

*Enoch was 65 years old when he begot Methuselah. After the birth of Methuselah, Enoch walked with God for 300 years, and had other sons and daughters. He lived 365 years. Having walked with God, Enoch was seen no more, because God had taken him away.*

Our friends and colleagues who left our presence during this past year are to be remembered today by this short service, yet when this service is over they will not be forgotten.

Each of them is a magnet that attracts us to the next world. They represent years of service

to mankind. The physician and his wife are a valuable asset to a community and when they are away they are missed and long remembered.

Eighteen physicians and six wives of physicians made the long journey last year and as I look about the audience today, I see vacant spaces and remember kind faces that used to be here with us — and then I think of death.

I want to share this story with you. A certain man had three companions, all of whom he valued, but by no means equally. The first and closest of them had become his chief reliance in any difficulty, whether business or personal. He trusted his friend completely and was happiest in his company.

For the second friend, he also felt a warm affection. He cherished this relationship, but did not have quite so much confidence in him.

The third friend he took casually, liking him and enjoying his company when there was time and occasion for seeing him.

Then came a day when this prosperous, highly respected citizen saw the King's messenger appear before the entrance of his handsome house. "I am to bring you before the King within the next

few hours", the herald said. "Make ready to follow me".

It was a terrible shock. The man said to himself, "surely some tale bearer has lied about me and brought false charges. I need an influential person to speak in my defense. I will bring the good old friend who has never failed me".

He hurried to his dearest friend and spoke of his need, confident that this most faithful comrade would come with him to the King, and plead his cause against the accuser. But to his dismay, the person in whose friendship he had put his trust looked at him coldly and merely shook his head. "This is no concern of mine", he said, "I am unable to come with you."

Broken-hearted, the man turned away. He then went to his second friend, and pleaded for his company and support in the appearance he must make at the King's Court.

This one was warmly sympathetic. He wept at his friend's plight, and made ready to accompany him. "I will go with you to the very gate of the King's Palace", he promised, "more I cannot do. There is no help for it".

In despair, the man made his way to the third friend, whom he had treated lightly. He ex-



Robert Watson takes the oath of office of the president of the Arkansas Medical Society, administered by out-going president Stanley Applegate.



John P. Wood of Mena addresses the House of Delegates on Wednesday, accepting the office of president-elect of the Society.

plained his predicament. "I am guilty of no crime, yet who knows what false accusations may have preceded me?" "I am afraid, too, that I may not conduct myself worthily in that august presence". He broke off, for he remembered the former refusals and felt unable to face another. "What shall I do?" he asked.

The third friend took his hand. "I will go with you", he said calmly. "There is nothing to fear. We shall appear together before our King. I can always gain admittance, and believe me I will plead your cause as though it were my own".

And so it came about. The third companion spoke eloquently in the man's defense and presented such evidence that he was cleared of blame and found favor with the King.

Who were the influential friends? The first friend represents money and earthly possessions. The second friend represents family and friends, who can only go as far as the grave or to the gates of the King's Palace. And the third friend represents the good deeds that justify a man before God the King.

These members of the Arkansas Medical Society and the Arkansas Medical Auxiliary that we are thinking about today are in the presence of the King by virtue of their being a part of our membership and the medical profession. They have performed countless deeds and acts of kindness in their daily lives. They have the Third friend to plead for them before the King.

Dr. Applegate and Mrs. Langston will read the list of our departed colleagues:

- Dr. Hoyt R. Allen, Little Rock
- Dr. Howell W. Brewer, Memphis
- Dr. William R. Brooksher, Fort Smith
- Dr. Francis W. Carruthers, Little Rock
- Dr. A. J. Dunklin, Searcy
- Dr. William B. Ellis, Stephens
- Dr. G. J. Floyd, Jr., Murfreesboro
- Dr. Albert W. Lazenby, Dumas
- Dr. Keller Lieblong, Conway
- Dr. Robert H. Manley, Clarksville
- Dr. Edward D. McKnight, Brinkley
- Dr. Stephen D. McMillion, North Little Rock
- Dr. William H. Mock, Prairie Grove
- Dr. Hans B. Molholm, Little Rock
- Dr. R. W. Pickett, Texarkana
- Dr. Joe T. Polk, Keiser
- Dr. Charles W. Reid, Pine Bluff

- Dr. Charles R. Walter, Montgomery
- Mrs. Agnes Ball Gray, Little Rock
- Mrs. Edith Rice Daniel, Gurdon
- Mrs. Don Smith, Hope
- Mrs. Raymond Cook, Little Rock
- Mrs. C. C. Reed, Jr., Little Rock
- Mrs. W. W. Christeson, Little Rock

How fitting it is that friends send lovely flowers to a funeral, for such occasion celebrates the soul's graduation.

Robert Louis Stevenson wrote these words of consolation. These I will leave with you and then Reverend Arnold will render our benediction and closing prayer.

He is not dead this friend: Not dead  
but, in the path we mortals tread,  
Gone some few, trifling steps ahead,  
and nearer to the end.

So that you, too, once past the bend,  
shall meet again, as face to face, this  
friend you fancy dead.

## FINAL SESSION HOUSE OF DELEGATES

Speaker of the House Amail Chudy called the final meeting of the House of Delegates to order at 10:00 A.M. on Wednesday, April 26, 1972, in Room "C" of the Arlington Hotel. He called on W. Payton Kolb for the invocation.

The Executive Vice President, Mr. Schaefer, called the roll of members. The following delegates, officers and members seated as delegates by action of the House were present:

- ARKANSAS, R. H. Whitehead; BAXTER, Jack C. Wilson; BENTON, James R. Knapp; BOONE, Robert Langston; CHICOT, C. D. Blackmon; CLARK, James T. Blackmon; COLUMBIA, J. E. Alexander; CRAIGHEAD-POINSETT, Joe Verser; CRAWFORD, Millard C. Edds; DALLAS, John H. Delamore; DREW, C. Lewis Hyatt; FAULKNER, C. A. Archer, Jr.; GARLAND, William Mashburn, Thomas Burrow, L. R. McFarland; GREENE-CLAY, A. J. Baker; HOT SPRING, Russell Cobb; HOWARD-PIKE, M. H. Wilmoth; INDEPENDENCE, Jim Lytle; JEFFERSON, C. C. Tracy, Banks Blackwell; LEE, E. C. Fields; MILLER, Donald Duncan; MONROE, N. C. David, Jr.; POLK, Pierre Redman; POPE-YELL, Kenneth New, James M. Kolb, Jr.; PULASKI, F. R. Buchanan, James L. Smith, Gilbert O. Dean, Bill G. Floyd, G. Thomas Jansen, John McCollough Smith,

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Robert Watson addresses the membership after being installed as president of the Society.



Past President H. W. Thomas presented to the new president, Robert Watson, a symbol of his initiation into the "Mystic Order of Wild Turkey Hunters".

Curry B. Bradburn, Jr., John V. Satterfield, James R. Weber, Charles W. Logan, Guy Farris, Stewart Allen, Fred Henker, W. Myers Smith, Julian L. Foster, Leighton Millard; SALINE, Donald Viner; SEBASTIAN, Annette Landrum, Neil Crow, Samuel E. Landrum, Kenneth E. Lilly, A. C. Bradford; SEVIER, Jim C. Citty; UNION, Jacob P. Ellis; WASHINGTON, Ruth Lesh; WHITE, John Bell. COUNCILORS Eldon Fairley, Hugh Edwards, Dwight Gray, L. J. Pat Bell, Raymond Irwin, John P. Burge, Kenneth R. Duzan, George F. Wynne, Carlton Kemp, C. Lynn Harris, James C. Bethel, Robert McCrary, W. Payton Kolb, William S. Orr, Morris Henry, Henry V. Kirby, C. C. Long, A. S. Koenig. PRESIDENT Robert Watson, FIRST VICE PRESIDENT Winston K. Shorey; SPEAKER Amail Chudy; VICE SPEAKER Charles F. Wilkins, Jr.; SECRETARY Elvin Shuffield; TREASURER Ben N. Saltzman; PAST PRESIDENTS L. A. Whittaker, C. R. Ellis, C. Lewis Hyatt, H. W. Thomas, Ross Fowler, and Stanley Applegate.

Speaker Chudy called for the report of the Nominating Committee. H. W. Thomas, Chairman of the Nominating Committee, presented the following proposed slate of officers:

*For President-elect —*

*John P. Wood, Mena*

*L. A. Whittaker, Fort Smith*

*For First Vice President —*

*Guy R. Farris, Little Rock*

*For Second Vice President —*

*Fred C. Inman, Jr., Carlisle*

*For Third Vice President —*

*Jim Lytle, Batesville*

*For Treasurer —*

*Ben N. Saltzman, Mountain Home*

*For Secretary —*

*H. Elvin Shuffield, Little Rock*

*For Speaker of the House of Delegates —*

*Amail Chudy, North Little Rock*

*For Vice Speaker of the House of Delegates —*

*Charles F. Wilkins, Jr., Russellville*

*For Councilors —*

*John B. Kirkley, Jonesboro*

*John E. Bell, Searcy*

*L. J. Pat Bell, Helena*

*John P. Burge, Lake Village*

*J. B. Jameson, Camden*

*C. Lynn Harris, Hope*

*Robert McCrary, Hot Springs*

*William S. Orr, Little Rock*

*Henry V. Kirby, Harrison*

*A. S. Koenig, Fort Smith*

*For Delegate to the American Medical Association (term from January 1, 1973, to December 31, 1974) —*

*C. C. Long, Ozark*

*For Alternate Delegate to the American Medical Association (term from January 1, 1973, to December 31, 1974) —*

*Joe Verser, Harrisburg*

L. A. Whittaker requested that his name be withdrawn as a nominee for the position of president-elect and that the proposed slate of officers be elected by acclamation. Upon motion by Koenig, the House so voted.

Speaker Chudy requested that Robert Watson and Pierre Redman escort the new president-elect to the podium. Dr. Watson noted that both he and Dr. Wood were natives of Mena, they had known each other all their lives and it was a privilege to escort Dr. Wood to the podium. Dr. Wood was given a standing ovation. In accepting the office, Dr. Wood made the following comments:

"This is my twentieth annual session and I would have to recall with some nostalgia Dr. R. C. Dickinson of Horatio and DeQueen who twenty years ago got me by the ear and personally drove me from Mena to the Annual Session. Dr. Bill Brooksher and Dr. R. C. kept twisting my ear and making me come to the Annual Session each year. As you know, you inaugurated another Mena resident, another Presbyterian, today. I know Bob Watson is quite a fund raiser and a keeper of the funds. Until a few minutes ago, I wasn't sure that I would be here next year. I am a defendant in a law suit. I retired after twenty years on the school board at Mena last month. Three days before I retired, I was in Florida and we had a disciplinary incident in the school and I am now a defendant in a \$90,000 law suit in the Federal Court. But the reason I know that I am going to be here now is that I understand our esteemed Counsel is defending the two teachers involved and I am quite sure I'll be back."

Again I want to thank you for your confidence in me and hope that I can justify the confidence. Thank you very much".

Speaker Chudy called on the chairman of Reference Committee Number One for a report.

**REPORT OF REFERENCE COMMITTEE  
NUMBER ONE**  
**F. R. Buchanan, Chairman**

Reference Committee Number One met as prescribed, holding open discussion hearings pertaining to items of consideration followed by closed session for deliberation. The following are the recommendations of Reference Committee Number One.

*Report of the Committee on Public Health (Rural Health). Recommended acceptance of the report.*

*Report of the Sub-Committee on Tuberculosis. Recommended acceptance of this report.*

*Report of the Sub-Committee on Physical Fitness and School Health. Recommended acceptance of this report.*

Mr. Speaker, I move approval of this portion of the report. There being no objection, it was so ordered.

*Report of the Immunization Sub-Committee. Although no member of the committee was present, report was discussed in open hearing and closed session. The committee recommends the following: "The Immunization Sub-Committee should be so structured as to represent all fields of medical practice concerned with immuniza-*

*tion, and appointments to the same should be made with such a balance in mind". With this amendment to the report, the committee recommends acceptance of this report.*

Chairman Buchanan moved approval of this portion of the report and the House so voted.

*Report of the Committee on Liaison with the Nursing Profession. Recommended acceptance of this report.*

*Report of the Committee on Medicine and Religion. Recommended acceptance of this report.*

*Report of the Arkansas State Advisory Committee to the Selective Service System. Recommended acceptance of this report.*

*Committee on Emergency Health Services Report. Recommended acceptance of this report.*

Mr. Speaker, I move approval of this portion of the report. There being no objection, it was so ordered.

*Report of the State Board of Health Liaison Committee. Heard discussion from previous and present chairmen who recommended this committee be discontinued. Most all matters requiring liaison with the State Health Department are handled with other respective committees concerned. The committee recommends this report*



Pierre Redman of Mena and Robert Watson of Little Rock (native of Mena) escort John P. Wood of Mena to the podium to accept the office of president-elect of the Society. House of Delegates, Wednesday, April 26, 1972.

be accepted with the following addition: "Consideration should be given to elimination of this committee."

Upon motion by Dr. Buchanan, this portion of the report was approved as presented.

*Report of the Sixth Councilor District Professional Relations Committee. Recommended acceptance of this report.*

*Report of the Seventh Councilor District Professional Relations Committee. Recommended acceptance of this report.*

*Report of the Eighth Councilor District Professional Relations Committee. Recommended acceptance of this report.*

*Report of the Ninth Councilor District Professional Relations Committee. Recommended acceptance of this report.*

*Report of the Committee on Insurance. Recommended acceptance of this report.*

*Report of the Medical and Health Manpower Commission. Recommended acceptance of this report.*

Dr. Buchanan moved approval of this portion of the report as presented and it was so ordered.

*Report of the Committee on Legislation. This report was not published, but was read at the House of Delegates session on April 23, 1972, and a copy of the report was received by the Reference Committee (see page 4 for the report). The Reference Committee recommended acceptance of this report. It was so ordered.*

*Greene-Clay County Medical Society Resolution. The resolution from Greene-Clay County Medical Society, as published in the Journal of the Arkansas Medical Society, Volume 68, Number 10, was discussed in open hearing. Arguments, both pro and con, were heard. The committee is in sympathy with several of the reasons for presenting the resolution. The committee deems the resolution presented in a non-workable manner and, therefore, recommends at this time rejection of the resolution. Upon motion of Buchanan, the House approved this portion of the Reference Committee report.*

Speaker Chudy read telegrams from Senators John L. McClellan and J. William Fulbright, extending best wishes for a successful meeting. Dr. Chudy also read a telegram from the Arkansas State Licensed Practical Nurses Association expressing thanks to the Medical Society for its continued support and cooperation.

Speaker Chudy called for the report of Reference Committee Number Two.

**REPORT OF REFERENCE COMMITTEE  
NUMBER TWO**

**Morriss M. Henry, Chairman**

Reference Committee Number Two held an open hearing on April 23, 1972, with all members of the committee present—Morriss M. Henry, Chairman; Kenneth R. Duzan, James C. Bethel, and Curry B. Bradburn. The attendance at the meeting was approximately eighty-five.

A great deal of discussion was heard concerning some items under consideration by this committee.

Reference Committee #2 has given deliberation to all reports assigned to it and submits the following recommendations.

The following thirteen reports appeared to be non-controversial. We recommend adoption of these reports as written:

*Report of the Committee on Mental Health.*

*Report of the Sub-Committee on Traffic Safety.*

*Report of the Sub-Committee on State Health and Medical Resources for Civil Defense.*

*Report of the Committee on Arrangements for Annual Session.*

*Report of the Senior Medical Day Committee.*

*Report of the Student AMA Liaison Committee.*

*Report of the Hospital - Insurance - Physician Committee.*

*Report of the First Councilor District Professional Relations Committee.*

*Report of the Fourth Councilor District Professional Relations Committee.*

*Report of the Fifth Councilor District Professional Relations Committee.*

*Report of the Arkansas State Department of Health.*

*Report of the Arkansas Regional Medical Program Representative.*

*Report of the Sub-Committee on Maternal and Child Welfare.*

Mr. Speaker, I move approval of each of these thirteen reports. The House so voted.

Reference Committee Number Two heard the Report of the Council. Several items in the report were brought up for discussion. One of the items was an increase in dues of the Arkansas Medical Society from \$90 to \$125 per year. The committee heard testimony as to the need for

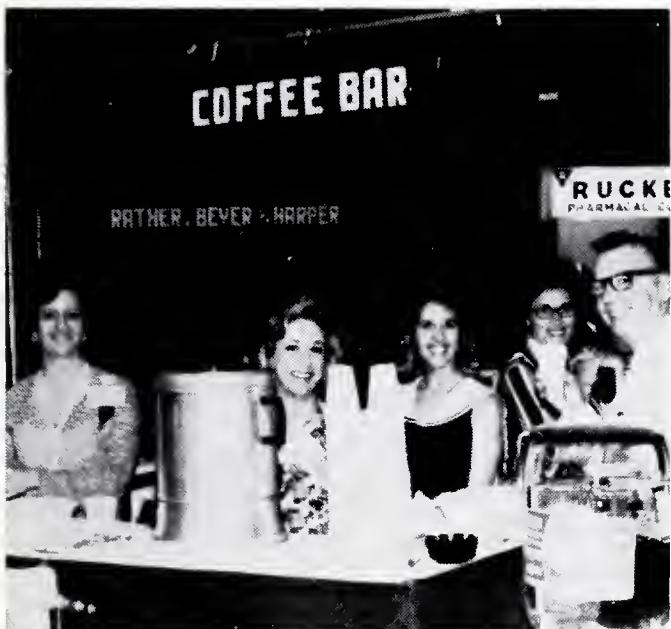
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Mrs. W. Myers Smith, President of Woman's Auxiliary, addressed the House of Delegates.



Marilyn Morgan, Miss Arkansas, was on hand in the Mountain Valley booth.



Members of the Medical Assistants Society served coffee in the exhibit area.



Morris Henry, Chairman of Reference Committee #2, presides at the committee's open hearing.



Members of the headquarters office staff handled the convention registration.



George Wynne of Warren makes the Memorial Address at the Society-Auxiliary Memorial Service on Tuesday.

additional funds because of inflation, increased participation in activities representing the doctors over the State, and the last mid-winter meeting of the Society being called off partly because of lack of funds. At the present time, we are operating with a \$7,500 deficit which seriously restricts the activities and services of the Arkansas Medical Society. The last year in which dues were raised to meet inflation was in 1966. After considerable discussion, the committee recommended adoption of the report of the Council.

Mr. Speaker, I recommend approval of the Report of the Council. Upon second by Koenig, the House so voted. There were eighty-six votes for adoption and thirteen against.

The Professional Services Review Organization report was also assigned to this committee. In regard to Medicare, a detailed explanation of the manner in which the fee schedule was developed for the five regions was heard. Also, a great deal of discussion and explanation from the members of the State Medical Society was heard by this committee. At first, the committee felt that the issue of whether a recommendation to the Department of Health, Education and Welfare to maintain five regions for the basis of payment by the Government for physician services or whether to recommend that Arkansas be made a single locality should be decided by the House of Delegates, without recommendation of this committee. However, after considerable thought by members of this committee, a second meeting was held and further discussion was carried out. The most important issue, and one which prompted the committee to change its mind and decide to make a recommendation to the House of Delegates, is not what the doctor receives from Medicare because of the location, because we all agree that each and every physician should be allowed to charge his or her own reasonable fees for services. However, when a third party is involved, particularly a governmental program, the benefit of the service to the taxpayer recipient should be compensated in a non-discriminatory fashion. That is, the Government should compensate a taxpayer for his or her medical expenses equally, whether they live in a large metropolitan area or a small rural area, and not by where he goes to see his doctor. Also, a very important consideration should be given to encourage physicians to practice in rural areas and small towns where there is a serious

shortage of qualified physicians. The present concept of dividing Arkansas into five regions, and paying physicians less for services in these rural areas than in metropolitan areas acts as a deterrent for physicians to locate in these areas. Therefore, this committee recommends to the House of Delegates that the Arkansas Medical Society endorse a one locality concept for the State of Arkansas.

Mr. Speaker, I recommend approval of this portion of the report. The vote for approval was sixty-four, with eleven votes against approval.

The report of Reference Committee Number Two was adopted as written.

Speaker Chudy called on the chairman of Reference Committee Number Three for his report.

#### **REPORT OF REFERENCE COMMITTEE NUMBER THREE**

**Robert F. McCrary, Chairman**

Reference Committee Number Three met on Sunday, April 23, 1972. Members of the committee, who were all present, were: James L. Smith, Kemal Kutait, Frank E. Morgan, and myself as chairman.

The report of the Sub-Committee on Liaison with Vocational Rehabilitation was discussed and the committee recommends that it be accepted without change. The committee recommends approval of this report and I so move. It was so ordered.

The report of the Committee on Medical Education was discussed without changes being recommended. The committee recommends approval of this report and I so move. It was so ordered.

The report of the Committee on Constitutional Revision was somewhat involved and included a supplemental report as well as an addendum presented orally at the Sunday meeting of the House. There was a great deal of spirited discussion carried out. The Reference Committee recommends that the original report be accepted as presented.

The Reference Committee makes the following recommendations regarding the supplemental report:

Change I regarding Article 4, Section 2, should be approved as recommended by the committee. It would, in essence, allow foreign graduates who are licensed by the Board of Medical Examiners

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H. W. Thomas inducts Robert Watson into the "Mystic Order of Wild Turkey Hunters".



Stanley Applegate of Springdale makes his "President's Address" at the banquet on Tuesday, April 25, 1972.



H. King Wade, Jr., of Hot Springs, and Mrs. Louis K. Hundley visit during the cocktail party on Tuesday.



Past President Stanley Applegate receives a plaque expressing appreciation of Medical Society for his year of service to medical profession and to the State.



A. S. Koenig, George Mitchell, Mrs. Koenig, Mrs. Mitchell, Joe Verser, and Stanley Applegate enjoy fellowship of the cocktail party on Tuesday.



Mrs. Kemal Kutait, Kemal Kutait and Mrs. Ken E. Lilly were among those attending the cocktail party on Tuesday.

*to become members of the Arkansas Medical Society. Despite spirited discussion regarding the advisability of allowing licensure of foreign graduates, it was firmly decided that adequate evaluation and screening is available and would be in effect to prevent undesirables either from foreign or United States medical schools obtaining licensure. The discussion, although spirited, was largely unilateral and the opinion was almost unanimous that the recommendation be approved.*

*Change 2 deals with the amendment of the Constitution to require councilors to submit a written report of the activities within their district to the Council for publication in the Journal. Change 2 should be accepted as recommended.*

*Change 3 deals with amendment to the Constitution to require the holding of councilor district meetings at specified times or intervals, no less frequently than once annually. Change 3 should be accepted as recommended.*

*Suggested change 8 would allow vice presidents to be re-elected and would increase the responsibilities by assigning them a number of committees of the Society for stimulation, guidance and liaison. Change 8 should be accepted as recommended with the provision that caution should be exercised by the president and the appropriate vice presidents to prevent the vice presidents, if re-elected, from replacing the present committee chairman in his responsibilities. The committee recommends approval of this change.*

*The oral addendum to the committee report was furnished in hand-written form to the reference committee. It concerned a suggestion by Dr. Norton that "each councilor district elect a medical student to the Council of the Arkansas Medical Society and its House of Delegates with full privileges to vote, speak and serve in committees". (See page 4 for the text of the report on this subject.)*

*After much discussion, and consideration of recommendations running the spectrum from the extreme of one student delegate per twenty-five members to the other extreme of offering no delegates, the Reference Committee recommends that medical students be allowed one delegate to the State Society House of Delegates and no representation on the Council of the Society. Dr. McCrary moved approval of this recommendation of the committee.*

*Speaker Chudy reviewed the changes proposed and recommended by the Reference Committee. Changes 1, 2, 3, and 8 were presented individually and accepted by the House.*

*Speaker Chudy then called for discussion on the item pertaining to student representation. After considerable discussion by the delegates, and upon motion of H. W. Thomas and A. S. Koenig, the House voted to refer the matter back to the Constitutional Revisions Committee for a specific proposal for amending the Constitution to provide for student membership and representation in the Governing Bodies.*

*Dr. McCrary then continued with the remainder of the report of Reference Committee Number Three:*

*The report of the Medical School was adopted as written and the committee recommends approval of the report.*

*The report of the Postgraduate Education Committee was discussed and the committee recommends approval of the report.*

*The report of the Executive Vice President and the Report of the Budget Committee were considered together and endorsed by the committee with the recommendation for approval.*

*The report of the AMA delegate was considered and the committee recommends approval of this report.*

*The report of the State Medical Board was read and discussed and the committee recommends approval of this report.*

*The report of the School of Medicine was discussed and the committee recommends approval of this report.*

*The resolution from the Independence County Medical Society was discussed at some length, with Independence County representation being present, and there was a firm consensus that, although good concepts were included in the resolution, for obvious reasons it should not be approved. The reasons being, in part, that our neighboring state of Louisiana has 6,000 charity beds with a total population some two times that of Arkansas. It is without the realm of reality to anticipate our 300 beds providing even token coverage for the charity needs of our State. The change of source of funds to the general fund was felt to be an area that would be extremely difficult or impossible to implement. After some*

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considerable discussion, the committee recommended disapproval of this resolution.

The report of Reference Committee Number Three was adopted by the House as amended.

Speaker Chudy thanked all members of the Reference Committee for their work.

A supplemental report of the Council, covering meetings held during the convention, was presented:

### REPORT OF THE COUNCIL

#### C. C. Long, Chairman

The Council met on Sunday, April 23rd, and transacted business as follows:

1. The Chairman introduced the senior medical students invited by the Council to attend its first meeting.
2. Heard Dr. Jefferson Farris, Dean of Health Sciences at the State College of Arkansas, Conway, discuss the program for the Arkansas Council for Health Careers sponsored by the Woman's Auxiliary to the Arkansas Medical Society and describe its need for financial support from the Medical Society and other health providers. The Council voted to pay annual dues to the Health Careers Council in the amount of \$2.00 for each member of the Arkansas Medical Society.
3. After discussion of increasing demands on Medical Society finances and the rising cost of doing business, the Council voted to recommend to the House of Delegates that it vote an increase in annual dues to \$125.
4. Nominated Dr. Amail Chudy and Dr. Payton Kolb for a position on the Drug Abuse Control Advisory Board.
5. Approved the following dues exemptions:

#### LIFE MEMBERSHIP

Joe H. Sanderlin	Pulaski County
G. Allen Robinson	Boone County
L. D. Massey	Mississippi County

#### AFFILIATE MEMBERSHIP

##### Retirement:

A. B. Dickey	Lawrence County
R. R. Kirkpatrick	Miller County
H. W. Savery	Crawford County
M. C. Hawkius, Jr.	White County
J. D. Kinley	White County
Sloan Sanford	White County
H. K. Carrington	Columbia County
Joseph H. Downs	Faulkner County
E. J. Chaffin	St. Francis County
William K. Bell	Craighead-Poinsett County

R. C. Shanlever	Craighead-Poinsett County
Martiu F. Heidgen	Pope-Yell County
William L. McNamara	Pope-Yell County
Cal D. Gunter	Benton County
James D. Jackson	Benton County
Charles C. Ault	Pulaski County
R. M. Blakely	Pulaski County
Martha M. Brown	Pulaski County
Alan G. Cazort	Pulaski County
Hoyt L. Choate	Pulaski County
Ellis P. Cope	Pulaski County
Eva F. Dodge	Pulaski County
Ruth Junkin	Pulaski County
Harold N. Miller	Pulaski County
James M. Nisbett	Pulaski County
Nicholas W. Riegler, Sr.	Pulaski County
Carl A. Rosenbaum	Pulaski County
Francis C. Rothert	Pulaski County
William A. Snodgrass, Jr.	Pulaski County
Irviu J. Spitzberg	Pulaski County
John A. Stathakis	Pulaski County
Charles Wallis	Pulaski County
A. M. Washburn	Pulaski County
C. Fletcher Watson	Pulaski County
Allen R. Russell	Jefferson County
Jeff Baggett	Washington County
H. L. Boyer	Washington County
Charles Brizzolara	Washington County
W. J. Butt	Washington County
LeMon Clark	Washington County
Joseph DeLane	Washington County
Howell Leming	Washington County
Vincent Lesh	Washington County
Lawrence Siegel	Washington County
Ross Van Pelt	Washington County

##### Disability:

Harry E. McEntire	Lonoke County
Eugene Hildebrand	Baxter County
Dewey Sloan	White County
C. A. Churchill	Independence County
Benjamin F. Banister	Faulkner County
H. H. Holt	Howard-Pike County
Hunter Sims, Sr.	Mississippi County
Daniel H. Autry	Pulaski County
Bryce Cummins	Pulaski County
Henry A. Crane	Jefferson County
V. L. Payne	Jefferson County
J. Max Roy	St. Francis County
Miles F. Kelly	Grant County
Roy I. Millard	Pope-Yell County
Charles E. Garrett	Garland County

##### Financial Reverses:

Henry C. Farrar	White County
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##### Military Service:

Robert R. Sykes	Howard-Pike County
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##### Intership and Residency:

William D. Morris	White County
Wallace A. Thomas	Chicot County
Gerald W. Johnson	Ashley County
Billy J. Jordan	Ashley County

PROCEEDINGS

L. O'Neal Sutter	Faulkner County
Richard W. Miles	Benton County
James A. Jenkins	Scott County
William J. James	Jefferson County
Carl Nash	Jefferson County
James Greenhaw	Washington County
Jack T. Patterson	Jolinson County
Luis F. Ardon	Pulaski County
Joe Paul Alberty	Pulaski County
Alan E. Aycock	Pulaski County
Ronald W. Baggett	Pulaski County
C. E. Ballard, Jr.	Pulaski County
Margaret D. Beasley	Pulaski County
Richard C. Bellas	Pulaski County
David W. Bevans, Jr.	Pulaski County
Jerry D. Blaylock	Pulaski County
James H. Bledsoe	Pulaski County
C. C. Councille, Jr.	Pulaski County
James H. Fraser, Jr.	Pulaski County
Cheryl D. Friday	Pulaski County
James H. Golleher	Pulaski County
Surinder Gupta	Pulaski County
Joe E. Holloway	Pulaski County
James R. House	Pulaski County
Ralph H. Jennings	Pulaski County
Edwin C. Jones	Pulaski County
Ray W. Leavelle	Pulaski County
Charles A. Ledbetter	Pulaski County
Virgle E. Lyons, Jr.	Pulaski County
Ord J. Mitchell	Pulaski County
Hosea W. McAdoo, Jr.	Pulaski County
Charles M. McClain, Jr.	Pulaski County
Robert J. McGowan, Jr.	Pulaski County
Donald E. McMillan	Pulaski County
James R. McNair	Pulaski County
Nirmal K. Pal	Pulaski County
J. Mayne Parker	Pulaski County
William F. Payne	Pulaski County
Larkus H. Pesnell	Pulaski County
James R. Phillips	Pulaski County
Nancy F. Rector	Pulaski County
John A. Rapiejko	Pulaski County
Earl B. Riddick	Pulaski County
Juan Sanchez-Humala	Pulaski County
Charles F. Sasley, Jr.	Pulaski County
George T. Schroeder	Pulaski County
James M. Sims	Pulaski County
John R. Sellars	Pulaski County
Joel F. Spragins	Pulaski County
Marolyn Speer	Pulaski County
James Y. Suen	Pulaski County
Steven A. Davie	Pulaski County
Jan W. Duncan	Pulaski County
Neil deSoyza	Pulaski County
Wilbur D. Giles	Pulaski County
Jan T. Turley	Pulaski County
Cynthia L. Worrell	Pulaski County
Lee A. Nauss	Pulaski County
Barry L. O'Neal	Pulaski County
Herman A. Talley, II	Pulaski County
Daniel J. Suiter	Pulaski County
Louis Singleton	Pulaski County

6. Nominated the following for positions on the Professional Services Review Organization:

Family Practice: Ross Fowler, Harrison

Internal Medicine: W. Sexton Lewis,  
Little Rock

Surgery: Henry Hollenberg, Little Rock  
Obstetrics-Gynecology: Robert F. McCrary,  
Hot Springs

Pediatrics: Lloyd R. Warford, Little Rock  
Pathology: R. A. Burger, Little Rock  
Orthopaedics: H. Austin Grimes, Little  
Rock.

7. Nominated Charles F. Wilkins, Jr., of Russellville, for a position on the Blue Cross-Blue Shield Board of Trustees, succeeding C. C. Long of Ozark.
8. Received with pleasure the announcement that George K. Mitchell has been promoted to Vice President of Arkansas Blue Cross-Blue Shield.
9. Nominated Martin Eisele to succeed himself on the Board of Trustees of the Medical Education Foundation for Arkansas.
10. Decided not to charge a registration fee to non-members who show scientific exhibits at the annual meeting.
11. Reiterated its decision to make no recommendation to the House of Delegates on the matter of whether or not to consolidate the five regions for payment under Medicare into one statewide region.

The Council met on Monday, April 24th, and transacted the following business:

1. Adopted a resolution urging the Governor and the State Legislature to support legislation for having the associate degree nursing program included in the curriculum of every State-supported college and university in the State.
2. Nominated George Talbot to succeed himself on the State Arbitration Commission.
3. Heard Ben Saltzman give his impression of the practice of medicine in England after a recent two-week inspection tour sponsored by the Health Services and Mental Health Administration of the Department of Health, Education and Welfare.

The Council met on Tuesday, April 25th, and transacted business as follows:

1. Heard Mr. Douglas Gully of the Gulf South Research Institute explain a new program

## PROCEEDINGS

for utilization review services to nursing homes in Arkansas.

2. Nominated the following for the Board of Trustees of the Arkansas Political Action Committee:

James Armstrong, Ashdown  
A. C. Bradford, Fort Smith  
Asa Crow, Paragould  
Ross Fowler, Harrison  
Raymond Irwin, Pine Bluff  
Karlton Kemp, Texarkana  
James Mashburn, Fayetteville  
James L. Smith, Little Rock  
Kemal Kutait, Fort Smith  
William S. Orr, Jr., Little Rock  
Mrs. G. Lynn Harris  
Mrs. W. Payton Kolb

3. Viewed a showing of a reel of samples of medical public relations films produced by the Los Angeles County Medical Association. The Chairman of the Public Relations Committee, A. C. Bradford, informed the Council that the Los Angeles County Medical Society produces a series of films and that they would be available to us for a rental of approximately \$100 each for showing on television. It would be necessary to purchase television time for the showing in most instances. The Council voted to receive the Public Relation Chairman's report for information and for action at the next meeting of the Council, depending on the financial situation of the Society at that time.

4. Voted to request several additional positions on the State Comprehensive Health Planning Advisory Council and to nominate the following for such positions:

W. Payton Kolb	A. S. Koenig
William S. Orr, Jr.	A. E. Andrews
John Bethel	N. C. David, Jr.
Raymond Irwin	John P. Burge
Ernest Harper	M. E. Blanton
Kemal Kutait	Lynn Harris
L. A. Whittaker	Ralph Wooley
Samuel Landrum	Glen Baker
Joe B. Hall	

The Council met on Wednesday and transacted the following business:

1. Appointed H. Austin Grimes as the Eighth Councilor District representative on the State Arbitration Commission.

2. Directed that a Council committee on liaison with the Arkansas State Licensed Practical Nurses Association be appointed.

3. Authorized the Professional Services Review Organization to include an Oral Surgeon as a consultant.

4. Adopted the following resolutions:

### RESOLUTION RE: ASSOCIATE DEGREE NURSE PROGRAM

WHEREAS, nursing education has changed with the responsibility shifting from a hospital based program to an educational agency based program, namely the specialized school (LPN) and the College degree programs (ADN and BSN), and

WHEREAS, now nursing has been divided in its responsibilities into principally the practical or LPN group, the technical or ADN group, and the professional or BSN group, and

WHEREAS, although in Arkansas there is considerable activity in training of all three of these groups, there does exist a severe shortage of technical nurses, and

WHEREAS, the ADN program is college based;

THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society recommends to the Governor and the Legislature of the State of Arkansas the support necessary for having the ADN nursing program included in the curriculum of every State supported college and university in the State.

### RESOLUTIONS COMMITTEE

W. Payton Kolb, M.D.  
George F. Wynne, M.D.  
Eldon Fairley, M.D.  
Charles F. Wilkins, Jr., M.D.  
Stanley Applegate, M.D.

### RESOLUTION OF APPRECIATION

WHEREAS, the 96th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success; and

WHEREAS, the management of the Arlington Hotel has facilitated our efforts in every way in providing meeting rooms, projection equipment, and otherwise assisting in arrangements for our meeting; and

WHEREAS, the hours of thought devoted by Dr. Winston K. Shorey and Dr. W. Martin Eisele, Co-Chairmen, and the Committee on Arrange-

ments have resulted in an outstanding program by members of faculty of the University of Arkansas School of Medicine and distinguished guest speakers from out of State; and

WHEREAS, the members of the Medical Assistants organization have been most helpful in serving as pages for the scientific sessions; and

WHEREAS, the fifth councilor district — Drs. Kenneth Duzan and George F. Wynne and the individual members thereof — have been gracious hosts, and have contributed greatly to our enjoyment; and

WHEREAS, the commercial and scientific exhibits were of great benefit to our gathering and the courteous and careful attention of the attendants was quite helpful; and

WHEREAS, The Vapors Supper Club made its facilities available to our group, and

WHEREAS, the Woman's Auxiliary contributed greatly through their diligence, attendance and inspiration;

NOW THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society records its sincere appreciation and expresses its heartfelt thanks to our host city, and those heretofore mentioned, for the cordial welcome, the extension of unbounded hospitality, the expression of good will and kindly feelings shown each member of the Society, who was privileged to attend this session. We shall ever hold in pleasant memory the hours spent as their guests during the last several days.

**RESOLUTION OF APPRECIATION:  
MEDICAL ASSISTANTS**

WHEREAS, the Arkansas State Medical Assistants Society has been most kind and generous in serving coffee and doughnuts to the members of the Society attending this 96th Annual Session; and

WHEREAS, the coffee bar has added much to the success of the meeting; and

WHEREAS, the medical assistants have demonstrated their support and dedication to the purposes of organized medicine;

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Arkansas Medical Society expresses its thanks and appreciation to the Medical Assistants Society and to its representatives who have been so gracious to us during the last several days.

**RESOLUTION OF APPRECIATION:  
NEWS MEDIA**

WHEREAS, the 96th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success, and

WHEREAS, Mr. George Douthit has made available to the Medical Society extended coverage of its meetings; and

WHEREAS, the television stations, newspapers and radio stations of the State have given good coverage of the meeting,

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Arkansas Medical Society expresses its appreciation to Mr. Douthit and to other representatives of the news media.

**RESOLUTION RE: BLUE CROSS-BLUE SHIELD**

WHEREAS, the 96th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success; and

WHEREAS, Arkansas Blue Cross-Blue Shield has been most kind and generous in hosting a cocktail party for the membership;

NOW THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society expresses its thanks and appreciation to Arkansas Blue Cross-Blue Shield and to its representatives who have been so gracious to us.

**RESOLUTION RE: HILDEGARDE**

WHEREAS, the 96th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success; and

WHEREAS, entertainment by Hildegarde at the Inaugural Banquet has contributed greatly to our enjoyment, and

WHEREAS, Mountain Valley Water Company has made Hildegarde available to entertain the Medical Society,

NOW THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society expresses its sincere appreciation and heartfelt thanks to Hildegarde and to Mountain Valley Water Company for their contributions to the success of the Society's convention.

Upon the motion of C. C. Long, the House approved the supplemental report of the Council. Speaker Chudy announced that the following

*nominees for the State Board of Health positions had been selected by congressional district elections:*

*First District:*

*F. M. Wilson, Jonesboro  
John B. Kirkley, Jonesboro  
A. J. Forestiere, Harrisburg*

*Fifth District:*

*W. E. King, Russellville  
John McCollough Smith, Little Rock  
John Satterfield, Little Rock*

Speaker Chudy advised the House that members in the First Congressional district had nominated B. P. Raney of Jonesboro as the nominee for the vacancy on the Arkansas State Medical Board.

The House voted to accept the nominations by acclamation.

President Watson made the following remarks to the House:

*"We must remember that one of the basic teachings of the Marxist Doctrine is to divide and conquer. We live in a democracy and this morning we demonstrated a manner of conducting our business and by doing so we solved problems without any lasting petty prejudices or jealousy. We maintained our strength by continuing in this process of democracy and we maintain unity in that manner. For that reason, I want to commend the House of Delegates this morning for their action."*

Speaker Chudy called for an invitation for the 1974 meeting of the Arkansas Medical Society. Thomas Jansen, as president of the Pulaski County Medical Society, invited the Society to meet in Little Rock in 1974. T. E. Burrow of Garland County issued an invitation to the Society to return to Hot Springs in 1974. The House voted to accept the Little Rock invitation for the 1974 meeting.

The meeting adjourned at 11:30 A.M.

#### **REORGANIZATIONAL MEETING OF THE COUNCIL**

Immediately following adjournment of the House of Delegates, the Council held a brief meeting to reorganize. C. C. Long was re-elected chairman of the Council and Alfred Kahn, Jr., was re-elected editor of the Journal.

#### **AMENDMENTS TO CONSTITUTION AND BY-LAWS APPROVED ON FIRST READING AT THE 1972 ANNUAL SESSION**

I. Chapter VIII, By-Laws, Section I(A), delete committee # 14 "Committee on Continuing Education".

II. Chapter VIII, Section 15, delete:

"The Committee on Continuing Education shall consist of ten members, one from each councilor district. The Committee shall exercise leadership and responsibility in continuing review of the system of graduate medical education. It shall foster continuous efforts to increase excellence in the system of graduate education to serve the cause of medicine and to assure the public of continuing improvement in the graduate training of physicians in practice."

III. Chapter VIII, Section 6, delete:

"The Committee on Medical Education shall serve this State for the Committee on Medical Education of the American Medical Association, and shall have referred to it all questions pertaining to medical education. It shall maintain close relations with the officials and faculty of the University of Arkansas School of Medicine and the Arkansas Academy of General Practice, rendering at all times such assistance as it can in maintaining that institution as a Class A Medical School."

and substitute:

"The Committee on Medical Education shall be responsible for consideration of all questions pertaining to medical education. It shall maintain close relations with the officials and faculty of the University of Arkansas School of Medicine, the Arkansas Academy of Family Practice, and other groups interested in maintaining and improving medical education in our State institutions. It shall foster continuous efforts to increase excellence in the system of postgraduate education to serve the cause of medicine and to assure the public of continuing improvement in the postgraduate training of physicians in practice. The committee shall consist of ten members, one from each councilor district."

IV. Article 4, Section 2, delete:

"Only such person is eligible for active membership in a component society as (1) possesses the degree of Doctor of Medicine, issued by a medical school which at the time such degree was

conferred was approved by the Council on Medical Education and Hospitals of the American Medical Association, and (2) holds an unrevoked license to practice medicine and surgery issued by the Board of Medical Examiners which consists of members recommended by this Society." and substitute:

"Only such person is eligible for active membership in a component society as possesses the degree Doctor of Medicine and holds an unrevoked license to practice medicine and surgery by the Board of Medical Examiners which consists of members recommended by this Society."

#### CONVENTION REGISTRATION

Physicians	448
Medical Students	26
Medical Assistants, Nurses, Technicians	18
Scientific Exhibitors	25
Commercial Exhibitors	110
Auxiliary	6
Others	18
Total	651

Registration at the Convention of the Woman's Auxiliary to the Arkansas Medical Society was	202
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Mrs. W. Myers Smith of North Little Rock heads the Woman's Auxiliary for 1972-73. Mrs. A. S. Koenig of Fort Smith will serve the year as president-elect.

#### OFFICERS OF THE ARKANSAS MEDICAL SOCIETY 1972-1973

President	Robert Watson, 1026 Donaghey Building, Little Rock 72201
President-elect	John P. Wood, 907 Mena, Mena 71953
First Vice President	Guy R. Farris, 6213 Lee Avenue, Little Rock 72205
Second Vice President	Fred C. Inman, Jr., 521 North Williams, Carlisle 72024
Third Vice President	Jim E. Lytle, 181 South Broad Street, Batesville 72501
Secretary	Elvin Shuffield, 1000 Wolfe, Little Rock 72202
Treasurer	Ben N. Saltzman, 126 West Sixth, Mountain Home 72653
Speaker, House of Delegates	Amial Chudy, 1801 Maple, North Little Rock 72114
Vice Speaker of House	Charles Wilkins, 3005 W. Main Place, Russellville 72801
Journal Editor	Alfred Kahn, Jr., 1300 West Sixth, Little Rock 72201
Delegates to AMA	C. C. Long, 110 West Commercial, Ozark 72949
Alternates	Purcell Smith, 4001 West Capitol, Little Rock 72205
	Joe Verser, P. O. Box 106, Harrisburg 72432
	T. E. Townsend, 1310 Cherry, Pine Bluff 71601
Executive Vice President	Mr. Paul C. Schaefer, P. O. Box 1208, Fort Smith 72901

## PROCEEDINGS

### EXECUTIVE COMMITTEE OF THE COUNCIL

Chairman of the Council	C. C. Long, 110 West Commercial, Ozark 72949
President	Robert Watson, 1026 Donaghey Building, Little Rock 72201
President-elect	John P. Wood, 907 Mena, Mena 71953
Secretary	Elvin Shuffield, 1000 Wolfe, Little Rock 72202

### COUNCILORS

Dis- trict	Councilor Term Expires '73	Councilor Term Expires '74	Counties in District
1.	*Eldon Fairley P.O. Box 71 Osceola 72370	John B. Kirkley 810 Jeter Drive Jonesboro 72401	Clay, Craighead, Crittenden, Fulton, Greene, Lawrence, Mississippi, Poinsett, Randolph and Sharp
2.	*Paul Gray P. O. Box 82 Batesville 72501	John E. Bell 1400 W. Pleasure Searcy 72143	Cleburne, Conway, Faulkner, Independence, Izard, Jackson, Stone and White
3.	Dwight W. Gray 110 W. Chestnut Marianna 72360	*L. J. P. Bell 626 Poplar Helena 72312	Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff
4.	*Raymond Irwin 1421 Cherry Pine Bluff 71601	John P. Burge 134 S. Cokley Lake Village 71653	Ashley, Chicot, Desha, Drew, Jefferson and Lincoln
5.	*Kenneth R. Duzan 443 West Oak El Dorado 71730	J. B. Jameson, Jr. 110 Harrison, S.W. Camden 71701	Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita and Union
6.	*Karlton H. Kemp 408 Hazel Texarkana 75501	C. Lynn Harris P. O. Box 550 Hope 71801	Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk and Sevier
7.	James C. Bethel 221 East Sevier Benton 72015	*Robert F. McCrary 505 West Grand Hot Spring 71901	Clark, Garland, Grant, Hot Spring, Montgomery and Saline
8.	*W. Payton Kolb 1120 Marshall Little Rock 72202	William S. Orr, Jr. 500 S. University Little Rock 72205	Pulaski
9.	Morriss M. Henry P. O. Box 1225 Fayetteville 72701	*Henry V. Kirby 651 N. Spring Harrison 72601	Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren and Washington
10.	*C. C. Long 110 W. Commercial Ozark 72949	A. S. Koenig 922 Lexington Fort Smith 72901	Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian and Yell

\*Senior Councilor

# 1972 OFFICERS—COUNTY MEDICAL SOCIETIES

## ARKANSAS MEDICAL SOCIETY

ARKANSAS.....	Pres.—Ralph E. Ligon, Route 1, Box 21-D, Stuttgart 72160 Secy.—Carl E. Northcutt, Route 1, Box 21-D, Stuttgart 72160
ASHLLEY.....	Pres.—Donald L. Toon, 310 North Alabama, Crossett 71635 Secy.—Frederick N. Burt, P. O. Box 737, Crossett 71635
BAXTER.....	Pres.—John W. Sneed, 613 South Street, Mountain Home 72653 Secy.—Ben N. Saltzman, 126 West 6th, Mountain Home 72653
BENTON.....	Pres.—Donald D. Weaver, P. O. Box 9, Gentry 72734 Secy.—E. N. McCollum, P. O. Box 96, Decatur 72722
BOONE.....	Pres.—William A. Jones, 615 North Spring, Harrison 72601 Secy.—Donald Kreutzer, Boone County Hospital, Harrison 72601
BRADLEY.....	Pres.—George F. Wynne, 113 West Cypress, Warren 71671 Secy.—W. C. Whaley, 205 East Church, Warren 71671
CINCOT.....	Pres.—H. W. Thomas, 105 North Freeman, Dermott 71638 Secy.—Charles D. Blackmon, 434 So. Cokley, Lake Village 71653
CLARK.....	Pres.—George R. Peeples, 305 East Main, Gurdon 71743 Secy.—James T. Blackmon, 1008 Pine, Arkadelphia 71923
CLEBURNE.....	Pres.—W. Wayne Smith, 109 West Main, Heber Springs 72543 Secy.—D. H. McClanahan, 401 West Searcy, Heber Springs 72543
COLUMBIA.....	Pres.—Charles W. Kelley, 105 West North, Magnolia 71753 Secy.—Robert Hunter, 950 Highland, Magnolia 71753
CONWAY.....	Pres.—William H. Siddon, 601 South Moose, Morrilton 72110 Secy.—Thomas L. Buchanan, 200 South Moose, Morrilton 72110
CRAIGHEAD-POINSETT.....	Pres.—F. M. Wilson, 505 East Matthews, Jonesboro 72401 Secy.—James M. Robinette, 923 Union, Jonesboro 72401
CRAWFORD.....	Pres.—Ed G. Hopkins, 1103 Chestnut, Van Buren 72956 Secy.—Jack N. Thicksten, 164 Fayetteville, Alma 72921
CRITTENDEN.....	Pres.—H. G. Lanford, 308 South Rhodes, West Memphis 72301 Secy.—Keith B. Kennedy, 316 Tyler, West Memphis 72301
CROSS.....	Pres.—Vance J. Crain, P. O. Box 158, Wynne 72396 Secy.—Robert D. Bethell, P. O. Box 158, Wynne 72396
DALLAS.....	Pres.—Everette E. Estes, 205 East Third, Fordyce 71742 Secy.—Jack T. Dobson, 110 North Clifton, Fordyce 71742
DESHA.....	Pres.—Guy U. Robinson, 207 South Elm, Dumas 71639 Secy.—Howard R. Harris, 207 South Elm, Dumas 71639
DREW.....	Pres.—Van C. Binns, 201 East Trotter, Monticello 71655 Secy.—Charles E. Hicks, 216 South Main, Monticello 71655
FAULKNER.....	Pres.—Fred Gordy, Jr., 552 Locust, Conway 72032 Secy.—Bob Banister, 1300 Parkway, Conway 72032

PROCEEDINGS

FRANKLIN.....	Pres.—C. G. Long, 110 West Commercial, Ozark 72949 Secy.—David L. Gibbons, 506 West Commercial, Ozark 72949
GARLAND.....	Pres.—DuBose Murray, 505 West Grand, Hot Springs 71901 Secy.—M. R. Springer, Jr., 236 Central, Hot Springs 71901
GRANT.....	Pres.—Curtis B. Clark, 200 South Rose, Sheridan 72150 Secy.—Clyde D. Paulk, 200 South Rose, Sheridan 72150
GREENE-CLAY.....	Pres.—L. L. Shedd, 910 West Kingshighway, Paragould 72450 Secy.—J. Larry Lawson, 216 West Court, Paragould 72450
HEMPSTEAD.....	Pres.—C. Lynn Harris, P. O. Box 550, Hope 71801 Secy.—Lowell O. Harris, P. O. Box 550, Hope 71801
HOT SPRING.....	Pres.—Larry Brashears, 214 East Highland, Malvern 72104 Secy.—Russell Cobb, 1420 Potts, Malvern 72104
HOWARD-PIKE.....	Pres.—M. H. Wilmoth, 1400 Leslie, Nashville 71852 Secy.—M. H. Wilmoth, 1400 Leslie, Nashville 71852
INDEPENDENCE.....	Pres.—Bob G. Smith, 181 South Broad Street, Batesville 72501 Secy.—Lackey Moody, 377 Main, Batesville 72501
JACKSON.....	Pres.—Jerry M. Frankum, Jr., Second and Laurel, Newport 72112 Secy.—John D. Ashley, Second and Laurel, Newport 72112
JEFFERSON.....	Pres.—V. Bryan Perry, 1722 West 42nd, Pine Bluff 71601 Secy.—Bobby J. Jenkins, 1515 West 42nd, Pine Bluff 71601
JOHNSON.....	Pres.—Boyce W. West, P. O. Box 220, Clarksville 72830 Secy.—Guy P. Shrigley, 416 Sevier, Clarksville 72830
LAFAYETTE.....	Pres.—Robert W. Harrison, VA Hospital, North Little Rock 72114 Secy.—Willie J. Lee, P. O. Box 276, Stamps 71860
LAWRENCE.....	Pres.—J. B. Elders, 321 Southwest Third, Walnut Ridge 72476 Secy.—J. B. Elders, 321 Southwest Third, Walnut Ridge 72476
LEE.....	Pres.—Mac McLendon, P. O. Box 536, Marianna 72360 Secy.—Floyd S. Dozier, 29 North Poplar, Marianna 72360
LINCOLN.....	Pres.—J. W. Freeland, P. O. Box 159, Star City 71667 Secy.—Richard C. Petty, P. O. Box 580, Star City 71667
LITTLE RIVER.....	Pres.—J. G. Shelton, Jr., P. O. Box 397, Ashdown 71822 Secy.—N. W. Peacock, Jr., P. O. Box 397, Ashdown 71822
LOGAN.....	Pres.—William R. Daniel, 114 West Third, Booneville 72927 Secy.—James T. Smith, 710 North Express, Paris 72855
LONOKE.....	Pres.—Thomas O. Woods, Jr., England Hospital, England 72046 Secy.—B. E. Holmes, 305 West Front, Lonoke 72086
MILLER.....	Pres.—N. L. Rodgers, 401 East Fifth, Texarkana 75501 Secy.—R. H. Chappell, P. O. Box 1288, Texarkana 75501 Exec. Secy.—Mrs. Marilyn Pryor, P. O. Box 1843, Texarkana 75501
MISSISSIPPI.....	Pres.—Norman R. Saliba, 515 West Lee, Osceola 72370 Secy.—Eldon Fairley, P. O. Box 71, Osceola 72370

PROCEEDINGS

MONROE	Pres.—M. L. Dalton, P. O. Box 763, Brinkley 72021 Secy.—N. C. David, Jr., 108 West Ash, Brinkley 72021
NEVADA	Pres.—H. Blake Crow, 327 East Second, Prescott 71857 Secy.—H. Blake Crow, 327 East Second, Prescott 71857
OUACHITA	Pres.—James Guthrie, 530 Jefferson, S.W., Camden 71701 Secy.—L. V. Ozment, 530 Jefferson, S.W., Camden 71701
PHILLIPS	Pres.—H. B. Oldham, P. O. Box 2538, West Helena 72390 Secy.—William W. Biggs, Helena Hospital, Helena 72342
POLK	Pres.—David P. Hefner, 518 Janssen, Mena 71953 Secy.—Henry N. Rogers, 600 West Seventh, Mena 71953
POPE-YELL	Pres.—Ted Ashcraft, 809 West Main, Russellville 72801 Secy.—W. E. King, 3005 West Main Place, Russellville 72801
PULASKI	Pres.—G. Thomas Jansen, 500 South University, Little Rock 72205 Secy.—Frank Padberg, 500 South University, Little Rock 72205 Exec. Secy.—Mr. Paul Harris, University Tower Bldg., Little Rock 72204
RANDOPI PH	Pres.—Hal S. Barre, 213 West Broadway, Pocahontas 72455 Secy.—Albert L. Baltz, 110 West Broadway, Pocahontas 72455
SALINE	Pres.—F. Paul Hogue, 302 West South, Benton 72015 Secy.—James C. Bethel, 221 East Sevier, Benton 72015
SCOTT	Pres.—Harold B. Wright, P. O. Box 249, Waldron 72958 Secy.—Harold B. Wright, P. O. Box 249, Waldron 72958
SEARCY	Pres.—John H. Williams, P. O. Box 280, Marshall 72650 Secy.—John A. Hall, 302 East Main, Clinton 72031
SEBASTIAN	Pres.—Paul L. Rogers, P. O. Box 3096, Fort Smith 72901 Secy.—Charles H. Floyd, 617 South 16th, Fort Smith 72901 Asst. Secy.—Mrs. Jackie Boyd, 3101 Hendricks, Fort Smith 72901
SEVIER	Pres.—Wayne G. Pullen, Highway 70 West, DeQueen 71832 Secy.—Michael L. Buffington, P. O. Box 391, DeQueen 71832 Exec. Secy.—Mr. Walter E. Cox, DeQueen Clinic, Hwy. 70 West, DeQueen 71832
ST. FRANCIS	Pres.—Adron M. Bradley, P. O. Box 70, Forrest City 72335 Secy.—Patricia C. Davis, P. O. Box 4000, Forrest City 72335
UNION	Pres.—Paul G. Henley, 700 West Faulkner, El Dorado 71730 Secy.—Dorothy C. Sample, 427 West Oak, El Dorado 71730
WASHINGTON	Pres.—John M. Boyce, 609 West Maple, Springdale 72764 Secy.—Nancy A. Rabon, Evelyn Hills Shopping Cen., Fayetteville 72701
WHITE	Pres.—Porter R. Rodgers, Jr., 403 East Lincoln, Searcy 72143 Secy.—Hugh R. Edwards, 607 Woodruff, Searcy 72143
WOODRUFF	Pres.—B. E. Hendrixson, 306 East Third, McCrory 72101 Secy.—James Rowe, 306 East Third, McCrory 72101

**PROCEEDINGS**

# **COMMITTEES—ARKANSAS MEDICAL SOCIETY—1972-73**

	Term Expires		Term Expires
<b>COMMITTEE ON CANCER CONTROL</b>			
Frank G. Kimpuris, 115 North University, Little Rock 72205	1973	Donald B. Baker, 211 West Spring, Fayetteville 72701	1975
Charles R. Henry, 500 South University, Little Rock 72205— <i>CHAIRMAN</i>	1973	Thomas D. Honeycutt, 4121 West 11th, Little Rock 72201	1975
Robert L. McDonald, P. O. Box 7863, Pine Bluff 71601	1971		
Harmon Lushbaugh, 710 Lollar Lane, Fayetteville 72701	1971	SUB-COMMITTEE ON MATERNAL AND CHILD WELFARE	
(Vacancy)	1975	Dale Briggs, 1210 Look, Little Rock 72204	1973
Gilbert D. Jay, III, 200 South Rhodes, West Memphis 72301	1975	John W. Trieschmann, 236 Woodbine, Hot Springs 71901	1974
		E. Stewart Allen, 417 North University Avenue, Little Rock 72205— <i>CHAIRMAN</i>	1971
<b>COMMITTEE ON MEDICAL LEGISLATION</b>		Ewing C. Reed, Jr., 1119 Bishop, Little Rock 72202	1975
W. Payton Kolb, 1120 Marshall, Little Rock 72202	1973		
Martin Eisele, 101 Whittington, Hot Springs 71901	1973	SUB-COMMITTEE ON TUBERCULOSIS	
Robert Watson, Donaghey Building, Little Rock 72201	1973	L. J. Pat Bell, 626 Poplar, Helena 72342	1973
James D. Mashburn, 207 Dickson, Fayetteville 72701	1974	Robert M. Franklin, 3005 West Main Place, Russellville 72801	1973
Robert F. McCrary, 505 West Grand, Hot Springs 71901	1974	C. Clyde Tracy, 1421 Cherry, Pine Bluff 71601	1974
Henry A. Crane, Jr., 1107 Cherry, Pine Bluff 71601	1974	John P. Wood, 907 Mena, Mena 71953— <i>CHAIRMAN</i>	1971
Elvin Shuffield, 1000 Wolfe, Little Rock 72202— <i>CHAIRMAN</i>	1975	Jim City, P. O. Box 391, DeQueen 71832	1975
Joe Verser, P. O. Box 106, Harrisburg 72132	1975	Lawrence C. Price, P. O. Box 3006, Fort Smith 72901	1975
Allie E. Andrews, 315 East 5th, Texarkana 75501	1975		
<b>SUB-COMMITTEE ON NATIONAL LEGISLATION</b>		<b>COMMITTEE ON AGING</b>	
Haymond Harris, 1205 McLain, Newport 72112	1973	Bill D. Stewart, 415 North University, Little Rock 72205	1973
Vernon E. Sammons, Jr., 905 West Grand, Hot Springs 71901	1973	Gordon P. Oates, 1612 Maryland, Little Rock 72202	1973
George F. Wynne, 113 West Cypress, Warren 71671	1974	Thomas E. Burrow, 903 West Grand, Hot Springs 71901	1973
Dale Alford, 5700 West Markham, Little Rock 72205	1974	John F. Guenthner, 126 West Sixth, Mountain Home 72653	1974
George W. Jackson, 4313 West Markham, Little Rock 72205— <i>CHAIRMAN</i>	1975	Ivan H. Box, P. O. Box E, Huntsville 72740	1971
G. Thomas Jansen, 500 South University, Little Rock 72205	1975	Joseph A. Norton, 8570 Cantrell Road, Little Rock 72207— <i>CHAIRMAN</i>	1975
<b>COMMITTEE ON PUBLIC HEALTH</b>			
Ben N. Saltzman, 126 West Sixth, Mountain Home 72653— <i>CHAIRMAN</i>	1973	<b>SUB-COMMITTEE ON PHYSICAL FITNESS AND SCHOOL HEALTH</b>	
Bryant S. Swindoll, 4815 West Markham, Little Rock 72205	1973	Francis M. Henderson, 312 University Tower Building, Little Rock 72204	1973
Gordon P. Oates, 1612 Maryland Avenue, Little Rock 72202	1974	Betty A. Lowe, 300 East Sixth, Texarkana 75501	1973
Robert H. White, 1004 Dyer, Malvern 72104	1974	Coy C. Kaylor, 1673 North College, Fayetteville 72701	1973
C. Lewis Hyatt, 515 North Main Street, Monticello 71655	1974	J. A. Harrel, Jr., Route 5, Box 615A, Little Rock 72207	1971
		Robert H. Langston, 520 North Spring, Harrison 72601	1974
		Francis R. Buchanan, 500 South University, Little Rock 72205— <i>CHAIRMAN</i>	1975

## PROCEEDINGS

	Term Expires		Term Expires
<b>SUB-COMMITTEE ON INDUSTRIAL HEALTH</b>		<b>SUB-COMMITTEE ON LIAISON WITH VOCATIONAL REHABILITATION</b>	
Roy I. Millard, 3005 West Main Place, Russellville 72801	1973	John P. Wood, 907 Mena, Mena 71953	1973
H. Blake Crow, 327 East 2nd, Prescott 71857	1973	H. King Wade, Jr., 231 Central, Hot Springs 71901	1973
Keinal Kutait, 1120 Lexington, Fort Smith 72901	1974	Major E. Smith, 101 West Peddicord, Dermott 71638	1974
Banks Blackwell, 1726 Doctors Drive, Pine Bluff 71601	1974	Paul G. Henley, 700 West Faulkner, El Dorado 71730	1974
Howard Schwander, 1115 Bishop, Little Rock 72202— <i>CHAIRMAN</i>	1975	Tom P. Coker, 1673 North College, Fayetteville 72701	1974
I. Leighton Millard, 12th and Van Buren, Little Rock 72205	1975	Samuel B. Thompson, 5520 West Markham, Little Rock 72205— <i>CHAIRMAN</i>	1975
<b>COMMITTEE ON MENTAL HEALTH</b>		Thomas M. Durham, Jr., 505 West Grand, Hot Springs 71901	1975
William O. Young, Donaghey Building, Little Rock 72201	1973	<b>COMMITTEE ON MEDICAL EDUCATION</b>	
H. D. Luck, 908 Main, Arkadelphia 71923	1973	John L. Ruff, 104 Hospital Road, Magnolia 71753	1973
Richard C. Petty, P. O. Box 580, Star City 71667	1973	Lee B. Parker, Jr., 241 West Spring, Fayetteville 72701	1973
Fred D. Jarvis, Jr., 1031 North College, Fayetteville 72701	1974	Winston K. Shorey, 4301 West Markham, Little Rock 72205	1974
Donald S. Chambers, 924 Adelaide, Fort Smith 72901	1974	C. Lewis Hyatt, 515 North Main, Monticello 71655— <i>CHAIRMAN</i>	1974
Robert C. Carnahan, 4313 West Markham, Little Rock 72205	1975	Marlin B. Hoge, 314 North Greenwood, Fort Smith 72901	1975
W. Payton Kolb, 1120 Marshall, Little Rock 72202— <i>CHAIRMAN</i>	1975	Robert D. Dickins, Jr., 1026 Donaghey Building, Little Rock 72201	1975
Walter R. Oglesby, 324 West Pershing, North Little Rock 72114	1975	<b>COMMITTEE ON CONTINUING EDUCATION</b>	
<b>IMMUNIZATION SUB-COMMITTEE</b>		Claude F. Peters, 1420 Potts, Malvern 72104	1973
Vida H. Gordon, 4301 West Markham, Little Rock 72205	1973	C. Lynn Harris, P. O. Box 550, Hope 71801	1973
Charles E. Kemp, 809 Cobb, Jonesboro 72401	1973	Paul Wallick, 4301 West Markham, Little Rock 72205	1973
(Vacancy)	(1974)	Vance J. Crain, P. O. Box 158, Wynne 72396	1973
Howard R. Harris, 207 South Elm, Dumas 71639	1974	Porter Rodgers, Jr., 403 East Lincoln, Searcy 72143	1973
Mahlon Maris, 651 N. Spring, Harrison 72601	1975	Lee Parker, Jr., 241 West Spring, Fayetteville 72701— <i>CHAIRMAN</i>	1974
Calvin Austin, 1210 DeQueen, Mena 71953	1975	T. A. Feild, III, 3600 North "O" Street, Fort Smith 72901	1974
<b>SUB-COMMITTEE ON TRAFFIC SAFETY</b>		Bobby E. McKee, 505 East Matthews, Jonesboro 72401	1974
Carl L. Williams, 522 South 16th, Fort Smith 72901— <i>CHAIRMAN</i>	1973	James S. Taylor, 4301 West Markham, Little Rock 72205	1974
John P. Burge, 434 South Cokley, Lake Village 71653	1973	George F. Wynne, 113 West Cypress, Warren 71671	1975
Lonnie R. Turney, 101 South Third, McGehee 71654	1974	<b>COMMITTEE ON HOSPITALS</b>	
Louise M. Henry, 204 South East Street, Fayetteville 72701	1975	Art B. Martin, 1500 Dodson, Fort Smith 72901	1973
James G. Stuckey, Jr., 500 South University, Little Rock 72205	1975	George K. Mitchell, P. O. Box 2181, Little Rock 72203	1973
H. Austin Grimes, P. O. Box 5270, Little Rock 72205	1975	Raymond A. Irwin, 1421 Cherry, Pine Bluff 71601	1974
Donald L. Duncan, P. O. Box 778, Texarkana 75501	1975		

## PROCEEDINGS

Term Expires	Term Expires
Edgar J. Easley, 4815 West Markham, Little Rock 72205 (Vacancy)	Hunter Sims, Jr., 525 North 10th, Blytheville 1974
Paul N. Means, 1120 Marshall, Little Rock 72202	David B. Cheairs, 1624 Maryland, Little Rock 72202 1975
<b>COMMITTEE ON PUBLIC RELATIONS</b>	G. Grimsley Graham, 5322 West Markham, Little Rock 72205— <i>CHAIRMAN</i> 1975
G. Thomas Jansen, 500 South University, Little Rock 72205	Williams C. Holmes, Jr., 100 S. 14th, Fort Smith 72901 1973
A. S. Koenig, 922 Lexington, Fort Smith 72901	<b>COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS</b>
Gordon P. Oates, 1612 Maryland, Little Rock 72202	Joseph W. Ledbetter, 804 South Church, Jonesboro 72401 1974
Paul A. Wallick, 4301 West Markham, Little Rock 72205	Thomas W. Gray, VA Hospital, Fayetteville 72701 1974
A. C. Bradford, 100 South 14th, Fort Smith 72901— <i>CHAIRMAN</i>	Edgar K. Clardy, P. O. Box 850, Hot Springs 71901 1975
W. Ray Jouett, 1026 Donaghey Building, Little Rock 72201	Charles W. Silverblatt, 500 University Tower Building, Little Rock 72204 1975
<b>SUB-COMMITTEE ON LIAISON WITH THE AUXILIARY</b>	Robert L. Kerr, 353 East Eighth, Mountain Home 72653 1974
Anail Chudy, 1801 Maple, North Little Rock 72114— <i>CHAIRMAN</i>	Frank Padberg, 500 South University, Little Rock 72205— <i>CHAIRMAN</i> 1973
Charles F. Wilkins, 3005 W. Main Place, Russellville 72801	<b>COMMITTEE ON INSURANCE</b>
C. C. Long, 110 W. Commercial, Ozark 72949	John D. Wright, 321 Short, Benton 72015 1973
Elvin Shuffield, 1000 Wolfe, Little Rock 72202	James R. Weber, 1110 West Main, Jacksonville 72076 1973
Jack W. Kennedy, #3 Williamsburg Circle, Little Rock 72207	Charles F. Wilkins, 3005 West Main Place, Russellville 72801 1974
Gordon P. Oates, 1612 Maryland, Little Rock 72202	L. J. Pat Bell, 626 Poplar, Helena 72342 1974
<b>SUB-COMMITTEE ON STATE HEALTH AND MEDICAL RESOURCES FOR CIVIL DEFENSE</b>	J. Harry Hayes, Jr., 500 South University, Little Rock 72205— <i>CHAIRMAN</i> 1975
Hugh R. Edwards, 607 Woodruff, Searcy 72143	Paul H. Millar, Jr., Route 1, Box 21-D, Stuttgart 72160 1975
Kenneth R. Duzan, 443 West Oak, El Dorado 71730	<b>COMMITTEE ON LIAISON WITH THE NURSING PROFESSION</b>
Monroe D. McClain, 1120 Marshall, Little Rock 72202	Frank T. Padberg, 500 South University, Little Rock 72205 1974
Edgar J. Easley, 4815 West Markham, Little Rock 72205	Elbert H. Wilkes, 5322 West Markham, Little Rock 72205 1974
John W. Dorman, 1203 Sunset, Springdale 72764	J. R. Pierce, Jr., 1712 West 42nd, Pine Bluff 71601 1974
Ralph R. Wooley, P. O. Box 7267, Pine Bluff 71601	Morriess Henry, P. O. Box 1225, Fayetteville 72701 1974
Alvin Strauss, Jr., 110 East 7th Street, Little Rock 72201	C. Lewis Hyatt, 515 North Main, Monticello 71655— <i>CHAIRMAN</i> 1975
<b>ADVISORY COMMITTEE TO THE MEDICAL ASSISTANTS SOCIETY</b>	Charles E. Tommey, 412 North Washington, El Dorado 71730 1975
John L. Dedman, Jr., 415 Hospital Drive, S.W., Camden 71701	<b>COMMITTEE ON MEDICINE AND RELIGION</b>
T. E. Townsend, 1310 Cherry, Pine Bluff	Alvin W. Strauss, Jr., 110 East 7th, Little Rock 72201 1973
	Carl E. Wenger, 1624 Maryland, Little Rock 72202 1974

## PROCEEDINGS

Term Expires		Term Expires
	Kenneth A. Siler, 651 North Spring, Harrison 72601	
1974		W. T. Dungan, 4301 West Markham, Little Rock 72205
	Fred O. Henker, 4301 West Markham, Little Rock 72205	
1974		Joseph L. Rosenzweig, 236 Woodbine, Hot Springs 71901
	C. Randolph Ellis, 1004 South Main, Malvern 72104— <i>CHAIRMAN</i>	
1975		Louis R. MacFarland, 211 Hobson, Hot Springs 71901
	Kenneth Lilly, 1120 Lexington, Fort Smith 72901	
1975		George F. Wynne, 113 West Cypress, Warren 71671
	COMMITTEE ON ARRANGEMENTS FOR ANNUAL SESSION	
	Winston K. Shorey, 4301 West Markham, Little Rock 72205	
1973		Charles D. Cyphers, 519 West Faulkner, El Dorado 71730
	Gilbert S. Campbell, 1301 West Markham, Little Rock 72205	
1973		A. S. Koenig, 922 Lexington, Fort Smith 72901
		G. Thomas Jansen, 500 South University, Little Rock 72205— <i>CHAIRMAN</i>
		Dwight W. Gray, 110 West Chestnut, Marianna 72360
		1975



**MRS. W. MYERS SMITH**

**President**

**WOMAN'S AUXILIARY TO THE  
ARKANSAS MEDICAL SOCIETY**

**1972-1973**



*Report of 48th annual session of the Woman's Auxiliary to the Arkansas Medical Society.*

On Sunday afternoon, April 23, 1972, a lovely reception was given by Mrs. Harold Langston, president, and Mrs. W. Myers Smith, president-elect, in the president's suite at the Arlington Hotel, honoring the 1971-72 and the 1972-73 officers and board members. All auxiliary members were invited and many came and enjoyed this festive reception.

The forty-eighth annual session of the Woman's Auxiliary to the Arkansas Medical Society was duly opened on April 24, 1972 at Hot Springs, Arkansas by Mrs. Harold Langston, president. We were privileged to have as special guests Mrs. G. Prentiss Lee, Portland, Oregon, president, Woman's Auxiliary to the American

Medical Association, and Mrs. Raymond E. Jones, Louisville, Kentucky, president, Woman's Auxiliary to the Southern Medical Association. The AMA-ERF committee reported that \$2,000 had been sent from our State Auxiliary during the year.

The past presidents' breakfast was held on Tuesday morning. This group collected \$30 to be given to the W. R. Brooksher Student Loan Fund.

The Monday luncheon honored Mrs. Lee. Also honored were Mrs. Mason Lawson and Mrs. Richard Pierce, Jr., who were selected as co-Arkansas Auxiliary member of the year.

*Mrs. James C. Bethel  
Recording Secretary*



## EDITORIAL

# Medical Kaleidoscopy: The Anomaly of the General Specialist

Alfred Kahn, Jr., M.D.

**A**s long as a kaleidoscope is held still, one sees many interesting designs and well compartmented colors. As the kaleidoscope slowly moves, the well defined borders subtly elide into new patterns, many of which are entirely different than the previous ones—the rapidity of the changing pattern is directly proportional to the speed of the revolutionary motion.

So it is with medicine. If there is progress, there is going to be change. The change is directly proportional to the rate of progress in extending our horizons of knowledge. As long as people sicken, medicine has not progressed enough to afford the luxury of stopping scientific endeavors in unknown areas. There has to be change until that goal is achieved, which of course, implies both the knowledge to cure and the means to deliver the knowledge to the public.

The often alluded to geometric expansion in our scientific knowledge is producing some interesting side effects. Historically, modern American medicine began with Osler, Halstead, Welch, and Kelly—the Johns Hopkins quartet who really introduced an integrated, well planned mode of teaching medicine; their system revolutionized the quality of medical teaching, and resulted in wide spread improvement in the practice of medicine by practitioners. This occurred in the latter part of the last century. Their goal was to develop a sort of “renaissance man of medicine,” meaning a complete man in his area of competence. This more or less led to the recognition that the general physician had to be supported by specializing physicians of broad and intense competence. The general field of medicine was roughly divided at that time into surgery, internal medicine, obstetrics, and gynecology, and the medical basic sciences as pathology, etc.

Radiology, pediatrics, and other now well defined specialties were usually compartmented with one of these divisions.

A well trained surgeon rotated through three to five years of training in abdominal surgery, orthopedic surgery, ear, nose, and throat surgery, etc. and came out a competent individual in many areas—by the standards of those days. This equilibrium obtained as a fairly stable state until the last ten to fifteen years when a definite perceptible change began, and which change has continued and accelerated.

The most impressive aspect of this change is spinning off of bonafide subspecialties from the major specialty fields. What was the catalyst that brought this about? It was not indolence or a desire to do less or to have an easier life or training; the catalyst was progress.

The extensions of our knowledge have catalyzed a change and the old image of two, three, or four major areas of medicine is now hopelessly blurred. Not alone is there fractionation, but there is also “cross-over” from one major field to another. The only foreseeable stable future overview is that of a continuously changing pattern. Change seems to be the stable pattern, not a static set plan of medical specialties. To be a valid medical or surgical subspecialty, there has to be not alone a field of specialized knowledge too large for the general specialist to cope with but there have to be specialized techniques developed so that the knowledge can be applied. The field of surgery has gradually spun off neurosurgery, otolaryngology, plastic surgery, orthopedics, and a host of others. The general surgeon now by default is largely an abdominal surgeon. This illustrates fractionation. The field of gastroenterology not alone illustrates frac-

tionation, but also crossover. Gastroenterology was widely understood and practiced by all physicians and then developments in radiology added a new level of proficiency in diagnosis for the practitioner before he could attain gastroenterologic competence; this was followed by Schindler's incredible lens system through which the gastroscopist could view the stomach—thus adding a further refinement. Now, the popular fiber optic light conduction principle has been refined by the Japanese so that the hollow gastrointestinal canal can be visualized except for parts of the small bowel. The gastroenterologist of medical origin now snares polyps, biopsies bowel walls, dilates passageways, etc. The gastroenterologist is really a "cross-over" into the field of surgery.

This new super specialization carries with it the potential of great benefit to the patient, but it carries some potential threat if carried to an extreme and it also introduces a new somewhat amusing concept, the general specialist, meaning that he is not a subspecialist—and what is his niche. Here then is the general specialist, who is a, so to speak, part way specialist; he has had extensive training, but it is broadly based rather than intensive and confined to a narrow field. Is he less a specialist than the subspecialist. Manifestly, this is a matter of semantics, but there will be a necessary restructuring of the delivery of medical care because of subspecialization. It appears that the general physician will tend to see patients in community hospitals in cities of all sizes and particularly in rural areas. The general specialist will be seen more and more in the smaller communities where there is a good hospital; he will play a minor role compared to the general physician, but he will bring more specialized knowledge to the rural communities for the occasional case that needs to be referred; already there is a sprinkling of general surgeons and internists in cities of five to ten thousand population. The general specialist's position in the highly organized large city hospital is still somewhat loosely defined. Unquestionably, he will admit diagnostic problems that do not readily fall into a subspecialty; he will certainly be to some extent a family physician or surgeon; he will certainly have to be the coordinator who will integrate the activities of the subspecialists, where a number are focusing on a single case. Lastly, there is the niche of the subspecialist; probably, his domain and usefulness will be

limited solely to the large, highly structured staff of the big city hospitals; since he is a subspecialist and not a superspecialist (meaning that usually he has had no more training than the general specialist, his training is simply more limited), he will have to be strongly supported by the general specialist and the general physician in order to obtain the proper "so called care of the patient".

These new patterns of practice will hopefully lead to a higher standard of medical care. Regardless of this new evolving equilibrium among medical practitioners, it too will change.

There may be variations in training as to the length of training and the degree of intensification or limitation, but there is one unchanging fact in the tides of change, the aim of good medicine is good patient care. This can be administered by the general physician, general specialist, or subspecialist—and the term super specialist should be reserved for the physician in any of these categories who excels in caring for the needs of his patient.



#### **Coronary Care Courses Offered**

The University of Arkansas Medical Center and the Arkansas Regional Medical Program are planning to present the basic course in Coronary Care for physicians (Dr. Davis' five day course) in the fall of 1972. Any interested physicians may contact the Department of Continuing Education.

Physicians interested in attending a one or two day seminar in Coronary Care this fall should also contact the University of Arkansas Medical Center Department of Continuing Education, specifying either basic or advanced course.

#### **Course on Emergency Care to be Given**

The Committee on Injuries of the American Academy of Orthopaedic Surgeons will sponsor a Course on Emergency Health Care in Little Rock, September 13-16. Dr. Gerald S. Laros, of

the University of Arkansas School of Medicine and the Veterans Administration Hospital, will be chairman of the course. The course is designed primarily for ambulance drivers, emergency medical technicians, and other persons involved in providing emergency medical care.

#### **Children's Medical Camp**

A Children's Medical Camp, recommended and endorsed by the Central Arkansas Pediatric Society and the Arkansas Chapter of the American Academy of Pediatrics, will be held July 3-8, 1972, at Camp Aldersgate in Little Rock. The purpose of the camp is to provide camping experience for children from nine to sixteen

years of age who have medical problems or handicaps. Questions regarding a child's eligibility should be directed to Mr. Ray Tribble, Camp Director. Applications for scholarships and registration forms may be obtained by writing the camp office, 2000 Aldersgate Road, Little Rock 72205, or by telephoning 225-1444.

#### **Medicine-Religion Symposium**

A Statewide meeting of physicians and ministers is scheduled for October 28th at the University of Arkansas Medical Center. Dr. Milford O. Rouse of Dallas, Texas, and Dr. Richard Halverson of Washington, D. C., will be the keynote speakers.



## **PERSONAL AND NEWS ITEMS**

#### **Dr. Baker to Leave State**

Dr. C. Rodney Baker, who has practiced medicine in Fayetteville since 1960, has accepted the position of Associate Professor of Ambulatory Care and Community Medicine at the University of Texas Medical School at San Antonio, Texas. Dr. Baker plans to leave Fayetteville in early July.

#### **Dr. Applegate Guest Speaker**

Dr. Stanley Applegate of Springdale was a guest speaker at the Arkansas Pharmaceutical Association's 90th Annual Convention held in April in Hot Springs.

#### **Members Participate in Medical Assistants' Meeting**

The following physicians participated in the Arkansas State Medical Assistants Society's annual convention April 7th thru 9th in Fayetteville: Drs. John Boyce and Stanley Applegate of Springdale, and Drs. Jack Edmiston, W. Ely Brooks, Joe B. Hall, Edwin Whiteside, and James D. Mashburn, all of Fayetteville.

#### **Dr. Parsons Relocates**

Dr. V. Earl Parsons, who formerly practiced in Malvern, has recently opened an office at 117 North 11th Street in Arkadelphia.

#### **Dr. Ed Wheat Guest Speaker**

Dr. Ed Wheat of Springdale was the guest speaker at the annual Mother-Daughter Banquet sponsored by the Farmington Chapter of the Future Homemakers of America. Dr. Wheat's topic was "Womanhood". The banquet was held April 22nd in Springdale.

#### **Dr. Walker Elected to Membership**

Dr. Walter L. Walker of Brinkley has been elected to active membership in the American Academy of Family Physicians.

#### **Dr. Pappas Speaks at Conway**

Dr. James J. Pappas of Little Rock spoke to the Arkansas Council for School Nurses at their Seventh Annual Workshop at the State College of Arkansas in Conway on May 4th. The subject of Dr. Pappas' talk was "Hearing Problems in Children".

#### **Dr. Boyer Honored**

June marks the 60th anniversary of Dr. H. L. Boyer's practice of medicine, of which the last twenty-six years have been in Lincoln, Arkansas. A reception honored Dr. Boyer on April 16th.

#### **Dr. Kolb Attends Convention**

Dr. W. Payton Kolb of Little Rock attended

the American Psychiatric Association Convention, held May 1st thru 5th in Dallas, Texas.

#### **Dr. Applegate Honored**

Approximately eighty guests attended an informal potluck supper April 14th honoring Dr. Stanley Applegate, immediate past president of the Arkansas Medical Society. The dinner was at the home of Dr. and Mrs. Wade Burnside. The event was combined with the annual dinner sponsored by the Washington County Medical Auxiliary to honor area physicians.

#### **Arkansas Orthopaedic Society Officers Chosen**

At its April 25th meeting in Hot Springs, Dr. Harold G. Hutson of Little Rock was elected president of the Arkansas Orthopaedic Society and Dr. Tom P. Coker of Fayetteville was elected secretary-treasurer.

#### **Physician Attends Dedication Ceremonies**

Dr. Joseph B. Wharton, Jr., of El Dorado, was the guest speaker at the dedication ceremonies for a new nursing education building at Southern State College in Magnolia. The building, to be named the Joseph Burleson Wharton, M.D., Nursing Education Building, was named for his father.

#### **Members Attend Meeting**

The 1972 convention of the National Association for Practical Nurse Education and Service was held April 9-13, in Hot Springs. Dr. C. A. Hoffman, president-elect of the American Medical Association, was the key speaker at the opening meeting. Dr. Robert Watson, president-elect of the Arkansas Medical Society, addressed the convention on opening night. Dr. Elvin Shufield was among other physicians who attended a "good neighbor luncheon".

#### **Yell County Physicians Host Dinner**

Yell County physicians hosted the Doctors' Day Dinner given for physicians in Pope-Yell County on March 30th at the home of Dr. and Mrs. Gene D. Ring. Serving as hosts were Dr. Walter Harris, Dr. Frank Gavlas, Dr. Jerome Luker, Dr. James Harbison and Dr. James Maupin.

#### **Dr. Good Elected**

Dr. Henry Good of Little Rock has been elected president of the Arkansas Psychiatric Society. Dr. Robert H. Harrison of North Little Rock was elected president-elect, and Dr. Oscar Kozberg of Little Rock was elected treasurer. Their one-year terms began in May.



## **N E W M E M B E R S**



#### **Dr. Donald Lee Duncan**

Dr. Donald L. Duncan is a new member of the Miller County Medical Society. Dr. Duncan is a native of Memphis, Tennessee. He received a B.A. degree from Washington and Lee University, Lexington, Virginia, in 1958 and was graduated from the University of Tennessee College of Medicine in 1961. Dr. Duncan interned at the John Gaston Hospital, Memphis, Tennessee. His

residency work in Surgery was at the University of Tennessee Department of Surgery (City of Memphis and Affiliated Hospitals), Memphis, Tennessee. Dr. Duncan served as flight surgeon in the United States Navy from 1963 to 1965. He is Board Certified in Surgery. Since 1969, Dr. Duncan has been associated with the Southern Clinic in Texarkana.

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**Pulaski County Medical Society** announces the addition of four new members to its membership roll. They are:

#### **Dr. Juan Jenaro Roman-Lopez**

Dr. Roman-Lopez was born in Moca, Puerto Rico. He was graduated magna cum laude in 1959 from the University of Puerto Rico, Rio Piedras, Puerto Rico; and in 1963, he was graduated from the University of Puerto Rico School of Medicine, San Juan. Dr. Roman-Lopez completed his internship at the Gorgas Army Hospital, Canal Zone, Panama. His residency work in Obstetrics and Gynecology was done at the

San Juan City Hospital, San Juan, Puerto Rico; and the Charity Hospital of Louisiana-Tulane University Division, New Orleans, Louisiana. In 1969-70, Dr. Roman-Lopez was a Fellow in Gynecology at Tulane University School of Medicine.

He is an Assistant Professor in Obstetrics and Gynecology at the University of Arkansas Medical Center.

#### **Dr. Dwayne Lee Ruggles**

Dr. Ruggles is a native of Fairfield, Iowa, and received a B.A. degree from the University of Missouri in Columbia. In 1967, Dr. Ruggles was graduated from the University of Missouri School of Medicine, Columbia, Missouri. He is presently receiving residency training in Otolaryngology at the University of Arkansas Medical Center.

#### **Dr. John Thomas Smith**

Dr. J. Thomas Smith, a native of Little Rock, received his pre-medical education at Southern Methodist University, Dallas, Texas, and in 1964, he was graduated from the University of Arkansas School of Medicine. His internship was completed at Christ Hospital, Cincinnati, Ohio. Following the completion of one year of a General Surgery residency at the Arkansas Baptist Medical Center, Dr. Smith completed a three-year residency in Otolaryngology at Columbia Presbyterian Medical Center, New York, New York.

Dr. Smith is an instructor of Otolaryngology at the Little Rock Veterans Administration Hospital, and is in private practice with his father, Dr. John William Smith, at 1415 West Sixth in Little Rock.

#### **Dr. Jerry Lynn Thomas**

Dr. Jerry L. Thomas was born in Batesville. In 1958, he received a B.S. degree from the University of Arkansas in Fayetteville, and was graduated from the University of Arkansas School of Medicine in 1962. Dr. Thomas interned at Balboa Naval Hospital, San Diego, California, and received one year of General Surgery training at the United States Naval Hospital in Oakland, California. He then returned to the University of Arkansas Medical Center, where he completed a three-year residency in Orthopedics. Dr. Thomas' office for the practice of Orthopedic Surgery is at 500 South University, Little Rock.

**Sebastian County Medical Society** has added the following names to its membership list:

#### **Dr. Richard R. Aclin**

Dr. Aclin is a native of Little Rock. He received his pre-medical education at Hendrix College in Conway. In 1964, he was graduated from the University of Arkansas School of Medicine. Dr. Aclin interned at the Arkansas Baptist Medical Center and completed a residency in Pediatrics at the University of Arkansas Medical Center. Following his discharge from the United States Air Force in 1971, after six years of active duty, Dr. Aclin joined Dr. John Watts in the practice of Pediatrics at 500 South 16th Street in Fort Smith. Dr. Aclin is Board Certified in Pediatrics.

#### **Dr. Joe Henry Dorzab**

Dr. Dorzab was born in Joplin, Missouri. He attended the United States Air Force Academy and the University of Missouri at Kansas City. In 1966, he was graduated from the University of Kansas School of Medicine. Dr. Dorzab completed his internship at Good Samaritan Hospital, Phoenix, Arizona. His residency work in Psychiatry was at the Washington University Affiliated Hospitals-Barnes Hospital, in St. Louis. Dr. Dorzab specializes in Psychiatry. He is associated with Dr. Donald Chambers at 924 Adelaide in Fort Smith.

#### **Dr. Ralph Nelson Ingram**

Dr. Ingram is a native Fort Smithian. He attended the University of Arkansas, being granted a B.A. degree in 1965, and in 1969 he was graduated from the University of Arkansas School of Medicine. Dr. Ingram interned at St. Vincent Infirmary in Little Rock. He is associated with Dr. Kemal Kutait, Dr. Kenneth Lilly, and Dr. Lawrence Pillstrom for the general practice of medicine at 1120 Lexington, Fort Smith.

#### **Dr. Thomas Graves Parker**

Dr. Parker was born in Murray, Kentucky. Following his discharge from the United States Air Force in 1953, Dr. Parker entered Murray State College and received a B.S. degree in 1955. He received his medical education at the University of Louisville School of Medicine, Louisville, Kentucky, and completed his internship at St. Joseph Infirmary, also in Louisville. He practiced for seven years in Murray, Kentucky, before beginning a residency in Radiology, which he completed in 1970. Dr. Parker is associated with Dr. Paul Rogers, Dr. Jerry Holton, and Dr. W.

## NEW MEMBERS

T. Huskison at 318 North Greenwood in Fort Smith, where he specializes in Radiology.

### Dr. Kent Smith

Dr. Smith is a native of Lubbock, Texas. He received a B.A. degree from the University of Texas in 1959 and was graduated from Washington University School of Medicine, St. Louis, Missouri, in 1962. Dr. Smith interned at Baylor University Medical Center and remained there for his residency work in Pathology. He served two years in the United States Army, and was in practice in Waco, Texas, from 1969 to 1971. Dr. Smith's associates for the practice of Pathology are Dr. A. S. Koenig, Dr. R. G. Girkin, and Dr. O. L. Davenport, at 922 Lexington Avenue, Fort Smith. Dr. Smith is Board Certified in Pathology.

### Dr. Roy E. Vanderpool

Dr. Vanderpool was born in Port Arthur, Texas. He attended Harding College and the University of Arkansas School of Medicine, graduating from the latter in 1964. He completed his internship at St. Joseph Hospital, Wichita, Kansas, and returned to the University of Arkansas Medical Center for his residency work in Dermatology. From 1968 to 1970, Dr. Vanderpool served in the United States Air Force. He is Board Certified in Dermatology and is associated with the Cooper Clinic in Fort Smith.

### Dr. Lloyd H. Mattice

Dr. Lloyd H. Mattice is a new member of the Washington County Medical Society. A native of Paullina, Iowa, Dr. Mattice was graduated from Morningside College, Sioux City, Iowa, and the University of Iowa College of Medicine, Iowa City, Iowa. Dr. Mattice completed his internship at St. Lukes Hospital in Duluth, Minnesota. He served two years as Chief of the Eye, Ear, Nose and Throat Section, 90 Station Hospital in New Guinea during World War II. From 1946 to 1959, he practiced in Sheldon, Iowa, and from 1959 to 1971, he practiced in Sioux Falls, South Dakota. Dr. Mattice is now in practice in Springdale at 206½ East Emma Avenue, where he is an Ear, Eye, Nose, and Throat specialist.

### Dr. Ernest M. Singleton

Dr. Ernest M. Singleton has been accepted for membership in the Washington County Medical

Society. Dr. Singleton was born in Tyler, Texas. He received a B.A. degree from Rice Institute, Houston, Texas, in 1959. In 1964, he was graduated from Washington University School of Medicine, St. Louis, Missouri. After completing his internship at St. Luke's Hospital in St. Louis, he served six years in the United States Navy. In 1968, Dr. Singleton entered Duke University, Durham, North Carolina, where his residency work in Ophthalmology was completed in 1971. His office for the practice of Ophthalmology is located at 1617 North College in Fayetteville.



## OBITUARY

### Dr. Walton Thomas Champion

Dr. Walton Thomas Champion of Stuttgart died April 27, 1972, at the age of fifty-six. He was born in Fayetteville.

Dr. Champion received his medical education at the University of Arkansas School of Medicine, graduating magna cum laude in 1939. He received additional medical training at the School of Aviation Medicine at Randolph Field, Texas; Cook County, Illinois, Postgraduate School of Medicine and Surgery; and the University of Tennessee Postgraduate School of Medicine.

Following five years of service with the Army Air Corps during World War II, Dr. Champion began his practice at Stuttgart and founded Champion Clinic (now McCracken Clinic).

He was a member of the Arkansas County Medical Society, the Arkansas Medical Society, and the American Medical Association; a member of the Grand Avenue United Methodist Church; a member of the American Legion; and he was a Mason.

Dr. Champion is survived by his wife, Mrs. Stella Gossom Champion, three sons, three daughters, four grandchildren, and three sisters.



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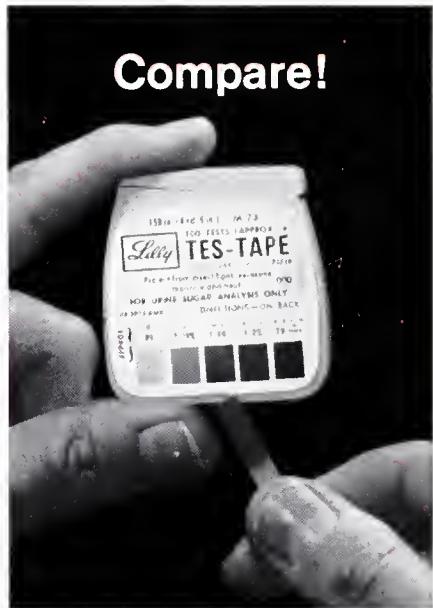
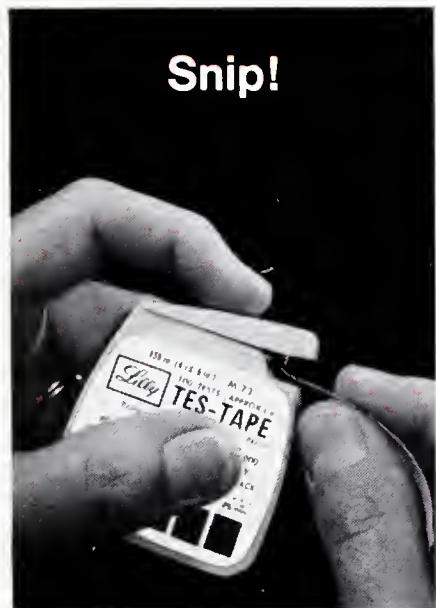
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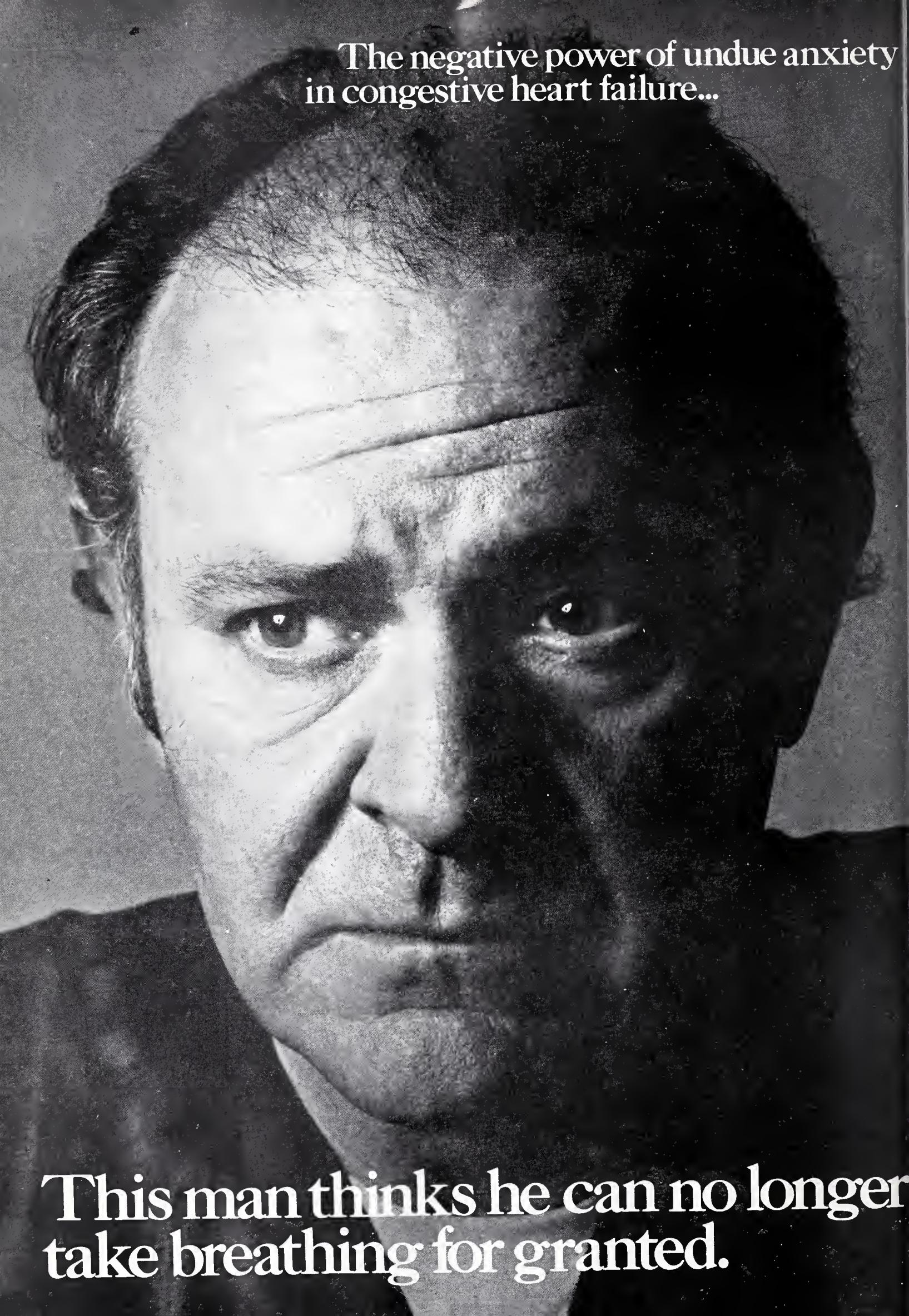
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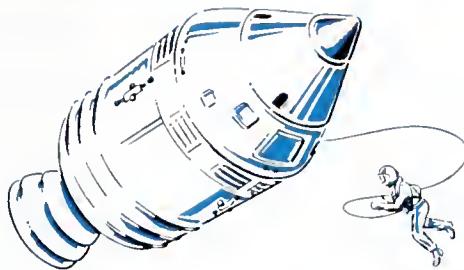
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# Newer Concepts in the Diagnosis and Therapy of Malignant Trophoblastic Disease

Charles B. Hammond, M.D.\*

## INTRODUCTION

While major progress has been made in many areas of oncology, the development of systemic chemotherapy for patients with malignant trophoblastic disease must remain one of the most unique and important chapters in cancer therapy. It is only with these diseases (choriocarcinoma and related tumors) that one expects high cure rates in patients, not only with localized but also with metastatic cancer. This paper will attempt to present the natural histories of these malignancies, the evolution of chemotherapy, and the earlier results of such treatment and, finally, some of the newer aspects of treatment which make possible essentially complete control of these rapidly fatal malignancies.

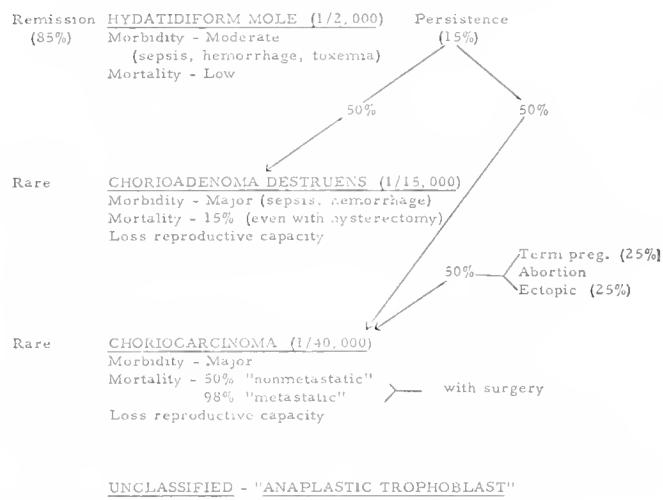
## NATURAL HISTORY

In 1889 Max Sanger<sup>1</sup> first proposed that there was a special tumor derived from the decidua of pregnancy. However, in 1895 Felix Marchand<sup>2</sup> demonstrated these malignancies were derived from the chorionic epithelium and were thus of fetal origin. Since that time many careful and thorough studies have defined the natural histories of this spectrum of malignancy that we now categorize as "Gestational Trophoblastic Neoplasms."<sup>3-7</sup>

Trophoblastic neoplasms show extreme variations in their natural course. (Figure 1). Most are pregnancy related. *Hydatidiform mole* occurs in approximately one of 1,500 to 2,000 pregnancies in the United States<sup>8</sup> and these patients

FIGURE 1

FIGURE 1: GESTATIONAL TROPHOBlastic NEOPLASIA



UNCLASSIFIED - "ANAPLASTIC TROPHOBlast"  
D&C Specimens

600 plus patients in USA each year with malignant forms.

have significant attendant morbidity (bleeding, sepsis, and toxemia), but a low mortality. Approximately 85 per cent of patients with molar pregnancy will enter complete remission with uterine evacuation.<sup>7,9</sup> The remaining 15 per cent will have persistent disease with either local or metastatic spread. Such dissemination may occur as any of the histopathologic types and by the time metastases are present a significant number have no demonstrable residual uterine disease. In excess of 95 per cent of such metastases are choriocarcinoma.<sup>3</sup> *Invasive mole* (chorioadenoma destruens) causes a significantly greater morbidity from perforation, hemorrhage, sepsis and, occasionally, metastasis. The mortality approximates 15 per cent, even with rapidly instituted and complete surgery.<sup>10</sup> *Choriocarcinoma* is probably the most uniformly and rapidly fatal malignancy of woman. Surgery yields less than

\*Department of Obstetrics and Gynecology, Duke University Medical Center, Durham, North Carolina.

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40 per cent remission even if this disease is confined to the uterus, and essentially no survivors are found if metastases are present. Death, usually by rapid and extensive hematogenous spread, frequently occurs in a few months.<sup>3,4</sup> In all of these categories, the usual surgery for the persistent or malignant disease is hysterectomy, precluding further reproduction. These diseases frequently form a continuum and often a precise histopathologic diagnosis is difficult to derive, especially with material obtained by curettage.

The expected occurrence rate is approximately 3,000 new patients with hydatidiform and 500-750 new patients with malignant gestational trophoblastic neoplasia in the United States each year.

#### **ROLES OF HISTOPATHOLOGY AND HCG ASSAYS**

For many years a variety of authors have felt histopathologic categorization of these tumors was of major prognostic significance.<sup>5,7,9,11,12</sup> This remains true for chorioadenoma destruens (invasive mole) and choriocarcinoma, but is now well demonstrated to be of little prognostic value for patients with hydatidiform mole.<sup>6,13</sup> Certainly the diagnosis of any form of trophoblastic tumor is important in making the original categorization, but only with the first two categories does this become a determinant for the initiation of treatment.<sup>14</sup>

The various forms of trophoblastic tumors make a hormone immunologically and biologically similar to human chorionic gonadotropin (HCG).<sup>15-20</sup> It also appears the amount of HCG present closely approximates the amount of viable trophoblastic tissue in the patient.<sup>6,21-23</sup> Thus, accurate HCG measurement, coupled initially with the histopathology, allows early diagnosis and, later, an efficient method to monitor the effects of treatment, remission and follow-up.<sup>14</sup> Cessation of therapy before the total eradication of all HCG will frequently allow exacerbation of disease resistant to further therapy.

Routine pregnancy tests (biologic and immunologic) are of major usefulness for these patients, but *only when positive*. This requires in excess of 1,000 I. U./24 hour urine.<sup>9</sup> If negative, however, one must utilize an assay technique capable to measure to within the normal range of pituitary gonadotropins (< 4 I. U./24 hour urine) to rule out persistent malignant disease. For such an assay we utilize mouse

uterine weight on kaolin concentrates of 24 hour urine collections.<sup>16,18</sup> Radioimmunoassays appear to offer an alternate, immunological technique. Despite the technique, the HCG titer must be accurately quantified to a relatively narrow range on each assay. With this and subsequent assays, one then can follow accurately the progress of the disease and the effects of therapy.<sup>3,15</sup> This accuracy far exceeds the usual measures of tumor size or x-ray change as indices of the oncolytic effects of treatment.

Most authors feel therapy should be instituted immediately with tissue diagnoses of choriocarcinoma or chorioadenoma destruens. In such individuals we measure HCG for a baseline, survey the patient for distant metastases, then begin therapy. If the tissue diagnosis is hydatidiform mole, one assays for HCG at biweekly intervals and surveys for metastases with physical and pelvic examinations and chest x-rays. If metastases develop, the HCG titer rises by a ten-fold amount, or if the HCG titer stays at all elevated by six to eight weeks after the initial evacuation, then we have suggested therapy be instituted immediately.<sup>14</sup>

#### **CHEMOTHERAPY**

Following several investigations which demonstrated the need of reproductive and gestational tissues for folic acid,<sup>24,25</sup> and the destructive effects on these tissues by certain antifolic agents,<sup>26</sup> Li<sup>27</sup> in 1956 reported the successful therapy of a patient with metastatic choriocarcinoma when treated with the antifolic compound, Methotrexate.

In the ten years from 1956-1966, Hertz and associates at the National Cancer Institute studied the effects of chemotherapy in 200 patients with malignant trophoblastic disease. In the initial 5 years experience,<sup>6</sup> 47 per cent of 63 patients with metastatic trophoblastic disease sustained complete remission with Methotrexate. Six toxic deaths occurred. The second 5 years experience<sup>23</sup> showed 74 per cent of 75 similar patients with metastases sustained complete remission after treatment with either Methotrexate or Actinomycin-D. In this group there were no toxic deaths, a factor demonstrating the need for careful and expert use of various hematologic and hepatic studies during treatment. Combination therapy used secondarily yielded poor results. Finally, 58 patients with "nonmetastatic disease" were

treated with Methotrexate,<sup>16,21,29</sup> yielding a 93 per cent complete remission rate and without a toxic death. Figure 2 summarizes "conventional" chemotherapy techniques for these diseases.

These data show the efficacy of chemotherapy for malignant trophoblastic disease. They also emphasize that successful response to chemotherapy is dependent on four factors: 1) duration of disease prior to onset of chemotherapy, 2) the height of the initial gonadotropin titer, 3) the proper administration of the drugs, and 4) cerebral or hepatic metastases. Cure rates as high as 95 per cent were observed among patients who were diagnosed early and treated adequately, even in the presence of metastatic disease. In contrast, in patients with long-standing and widely disseminated disease, only a 35-40 per cent remission rate could be expected.

Other authors<sup>16,30-35</sup> have reported on the treatment of trophoblastic disease with similar agents; however, no experience to date encompasses the large numbers of patients treated at the National Cancer Institute. In addition, the concept of Hertz and coworkers in treating nonmetastatic disease with chemotherapy for preservation of reproductive function is a relatively new one and not yet generally accepted by all practitioners.<sup>3,36</sup> The great difficulty in evaluating the increasing literature on trophoblastic disease lies primarily in the rather heterogeneous therapeutic regimens and in the rather uncertain applicability of insufficiently sensitive HCG assays. It is this latter factor which no doubt accounts for the high number of relapses and the development of resistant disease largely because of inadequate initial therapy.<sup>31,37</sup>

#### SOUTHEASTERN REGIONAL CENTER DATA (Figure 3)

The Southeastern Regional Center for Trophoblastic Disease was established at the Department of Obstetrics and Gynecology, Duke University Medical Center, to provide sensitive assays of HCG, consultative assistance, and to offer in-patient therapy for patients suspected of, or found to have, trophoblastic tumors. From September 1, 1966, through February 28, 1970, 608 patients have been screened for trophoblastic disease. Of these 608 patients, 470 had trophoblastic disease; 278 of these latter patients entered remission after uterine evacuation and did not require further therapy. Of the 171 requiring

#### FIGURE 2

##### METHOD

###### SYSTEMIC SINGLE AGENT CHEMOTHERAPY

1. Acute, intermittent regimen with repetitive 5-day courses of
  - Methotrexate 15-25 mg. I.M. q.d. or
  - Actinomycin-D 8-11 mcgm./kg. I.V. q.d.
  - (Minimum interval between courses: 5 days)
2. Continued courses until:
  - a) HCG titer becomes normal ( $< 4$  I.U./24 hours)
  - b) HCG titer "plateaus" with 2 courses
  - c) HCG titer rises significantly (10-fold)
  - d) New metastases appear
3. Monitor Induced Toxicity:
  - a) White blood count  $> 3000$  mm<sup>3</sup>
  - b) Polymorphonuclear granulocytes  $> 1500$  mm<sup>3</sup>
  - c) Platelets  $> 100,000$  mm<sup>3</sup>
  - d) Normal SGOT, SGPT, BUN
4. Monitor Oncolytic Effect:
  - a) Weekly HCG titers
  - b) Weekly chest x-ray
  - c) Weekly physical and pelvic examinations
5. Remission:
  - 3 consecutive weekly normal pituitary gonadotropin titers.
6. Follow-up:
  - a) Gonadotropin titers monthly x 6 months, bimonthly x 6 months, every 6 months thereafter.
  - b) No pregnancy for one year.
  - c) Routine evaluation every 3 months during first year.

— cease therapy.

— change agent or technique

Daily during Rx  
Alternate days between.

therapy for malignant trophoblastic disease, 136 were of gestational origin and provide the information for this report. All had tissue diagnoses of some form of trophoblastic neoplasm and elevated urinary HCG titers. Fifty-seven patients had metastases while 67 had disease confined to the uterus. For those patients with tissue diagnoses of hydatidiform mole, all were greater than 30 days beyond the initial uterine evacuation while those treated prior to 60 days after evacuation all had either metastases or greater than a ten-fold rise in HCG titer during that interval. Over half of these patients were treated at Duke with the Center reviewing histopathology and providing HCG assays and consultative assistance in all others. All infusional and combination chemotherapy were performed at the Duke Center. Over 10,000 HCG assays were performed.

In these 136 patients with malignant gestational trophoblastic disease, we were interested not only in the role of intensive single agent

chemotherapy, but also in the development of new methods to improve remission rates.

Single agent Methotrexate or Actinomycin-D regimens, as outlined in Figure 2, have been used for primary therapy. Added emphasis has been given to the method of selection of therapy for the patient with poor prognosis. The previously mentioned factors, prolonged duration of disease, high initial HCG titer, and cerebral or hepatic metastases, have been the signals for new techniques and more vigorous treatment as follows:

### **1. Intensive Combination Chemotherapy**

In an attempt to improve the results of treatment for selected patients with poor prognoses, we have utilized high dose, intensive, combination chemotherapy. Two groups of patients selected for this type of therapy are those with *initial* poor prognosis as noted above and those patients with metastatic disease who have developed resistance to all forms of conventional single agent therapy.

This regimen requires the simultaneous administration of Methotrexate, Actinomycin-D, and Chlorambucil in repetitive 5-day courses. Of note, the dosages of each of these agents are similar to the dosages one would usually employ if the agents were given singly. With this form of therapy the morbidity is major, primarily from marrow suppression and hepatic toxicity. Mortality will approach 15 per cent. In selected patients, several courses of this combination chemotherapy may be used initially, followed by completion of therapy by single agent treatment.

Finally, simultaneous radiotherapy (2,000 R delivered over 5-10 treatment days) is used when cerebral (whole brain irradiation) or hepatic (whole liver irradiation) metastases are shown. This frequently allows completion of chemotherapy without major hemorrhage from metastatic foci.

### **2. Adjunctive Chemotherapy**

The role of hysterectomy alone and the role of hysterectomy used in conjunction with chemotherapy<sup>6,31</sup> in the management of choriocarcinoma have been reported. These data do not permit accurate comparisons of the relative merits of the two modes of therapy.

To further evaluate the role of combining surgery and chemotherapy (Adjunctive Chemotherapy), this type of therapy has been under-

**FIGURE 3**  
SOUTHEASTERN REGIONAL TROPHOBLASTIC  
DISEASE CENTER

Duke University Medical Center, Durham, North Carolina  
September 1, 1966 — February 28, 1970

Total Contacts	618
Contacts Lost Before HCG Assay	10
Total Patients Screened	608
Patients with Trophoblastic Disease (All Forms)	470
Spontaneous Remissions (No Therapy)	278
Hydatidiform Mole (During Follow-up Interval)	21
Malignant Non-Gestational Trophoblastic Disease	35
Malignant Gestational Trophoblastic Disease	136
Patients with Malignant Gestational Trophoblastic Disease	136
With Metastases (Therapy Completed)	57
Non-Metastatic (Therapy Completed)	67
Currently Being Treated	12
Total Remissions	118
Deaths (Disease 3; Toxicity of Therapy 2; Died Prior to Institution of Therapy 1)	6
Number of Immunological HCG Assays	5,174
Number of Biological HCG Assays	5,480
	<hr/> 10,654

taken in several categories of patients: 1) those with nonmetastatic disease who do not desire further reproduction; 2) those with persistent uterine disease and who have developed resistance to single agent chemotherapy; and 3) those with metastases which have been controlled by chemotherapy but who have persistent uterine disease.

Single agent chemotherapy with either Methotrexate or Actinomycin-D is administered in the usual fashion (Figure 2) with the surgical procedure being done on the third day of the five-day course.

One might expect that the use of such agents would result in problems in wound healing or sepsis, but to date these complications have not been significant in our patients. The usually seen toxic sequelae of systemic chemotherapy have been present in these patients but have not been severe with these dose levels. We have also elected to continue with repetitive courses of chemotherapy (at similar dose levels) during the postoperative period, while gonadotropin excretion is monitored. Such therapy is continued until normal pituitary range titers are obtained.

### **3. Pelvic Arteriography and Regional Chemotherapy Infusion**

Pelvic arteriography has been used in patients with malignant trophoblastic disease for locali-

zation of persistent disease when the HCG titer is elevated and metastases are not apparent elsewhere.<sup>14</sup> If persistent disease is demonstrated in the uterus or pelvic region, arterial infusion of chemotherapeutic agents may follow. The usual Sedlanger techniques for arteriography are utilized. For therapy we have administered the chemotherapeutic agents by infusion pump *daily*, at dosages of approximately 50 per cent of those used systemically. Toxicity has been minimal. Actinomycin-D is "pulsed" over a two-hour span while Methotrexate is delivered continuously.

The literature contains the six listed complications of arterial therapy for malignant pelvic disease. Only thrombophlebitis has been a problem during infusion in our patients. Extraperitoneal surgical catheter insertion is a major procedure than percutaneous femoral artery entry; however, complications are less when the prolonged administration of chemical agents is desired.

### THERAPY RESULTS

During the three and one-half years from September 1966, the Southeastern Regional Center has participated in the care of 136 patients with malignant gestational trophoblastic disease. Twelve of these patients are currently being treated and will not be included in this report. Therapy has been completed in the remaining 124 patients. Criteria for diagnosis, institution of therapy and the method of therapy are listed elsewhere in this paper.

The 124 patients were initially classified as nonmetastatic (57) or metastatic (67), and the latter were categorized as "poor prognosis" (10) if the immediate pretreatment urinary gonadotropin titer was in excess of 100,000 I.U./24 hours, cerebral or hepatic metastases were present, or the duration of disease was in excess of 4 months from the date of antecedent pregnancy termination. Therapy was continued until urinary gonadotropins were within normal pituitary ranges, and the diagnosis of remission required 3 consecutive, weekly normal pituitary range titers. Remissions extended from 3½ years to lesser spans of time. Only one patient has required further therapy after the initial diagnosis of remission, and this recurrence developed 6 weeks after termination of the initial therapy; retreatment was successful. One patient conceived a second hydatidiform mole 18 months

after successful chemotherapy for malignant trophoblastic disease and subsequently had again successful therapy for nonmetastatic malignancy the second occasion. Neither specific histopathologic categorization nor the nature of the antecedent pregnancy was significant in determining the successful response to therapy.

### Patients with Nonmetastatic Disease (Figure 4):

FIGURE 4  
NON-METASTATIC TROPHOBLASTIC DISEASE  
Results of Therapy  
September 1, 1966 — February 28, 1970

Therapy Used	Primary Therapy	Primary Remission	Secondary Therapy	Secondary Remission	Death (Cause)
<hr/>					
Single Agent					
MTX/					
Act-D	44	37	x	x	0
<hr/>					
Arterial Infusion	1	0	1	1	0
<hr/>					
Surgery with Chemotherapy	22	22	7	7	0
Totals	67	59	8	8	0
<hr/>					
MTX = Methotrexate	Total Patients	67			
Act-D = Actinomycin-D	Remissions	67 (100%)			
	Deaths	0			

Sixty-seven patients were initially categorized by clinical staging studies as having "nonmetastatic" gestational trophoblastic disease. Systemic, single agent chemotherapy with Methotrexate or Actinomycin-D was the primary treatment regimen. If further pregnancy were not desired, then hysterectomy was carried out in conjunction with the initial course of chemotherapy. With these methods, 37 of 44 such patients treated with single agent chemotherapy (84%), and 22 of 22 patients treated with adjunctive hysterectomy (100%) entered remission. One patient was treated with arterial infusional chemotherapy initially, but due to catheter leakage the technique was abandoned. Thus, 59 of 67 patients entered remission successfully after initial therapy. The eight patients who failed to achieve remission with the initial therapy outlined above, all achieved remission by secondary hysterectomy in conjunction with chemotherapy (7 patients), and arterial infusional chemotherapy (1 patient). Thus, total remissions were 67 of 67 patients, or 100 per cent of patients with nonmetastatic disease, and only seven patients of the

45 who desired to retain their reproductive potential were unable to do so.

#### **Patients with Metastatic Disease (Figure 5):**

**FIGURE 5**  
**METASTATIC TROPHOBLASTIC DISEASE**  
Results of Therapy  
September 1, 1966 — February 28, 1970

Therapy Used	Primary Therapy	Primary Remission	Secondary Therapy	Secondary Remission	Death (Cause)
Single Agent					
MTX	49	38	x	x	
Act-D					2 Toxicity
Combination					3 Disease*
Chemotherapy	7	5	3	0	
Arterial Infusion			4	4	
Surgery with Chemotherapy			4	4	
Totals	56	43	11	8	5

MTX = Methotrexate

Act-D = Actinomycin-D

Total Patients

Remissions

Deaths

57

51 (90%)

6\*

\*1 patient with metastatic disease died 4 hours after admission, no therapy administered.

Fifty-seven patients were initially categorized by clinical staging studies as having "metastatic" gestational trophoblastic disease. Of these patients, ten were classified as "poor prognosis" because of the previously mentioned factors. Three of these latter patients were referred after unsuccessful single agent chemotherapy but failed to respond to combination chemotherapy (two died of resistant, disseminated disease and one died of drug toxicity). The other seven patients were initially placed in this "poor prognosis" category on the basis of cerebral or hepatic metastases and initial gonadotropin titer and were treated initially with combination chemotherapy and, if appropriate, radiotherapy (2,000 R to whole brain or liver); five have achieved complete remission while two died of drug resistant disease. One patient died prior to chemotherapy, six hours after admission.

The remaining 49 patients with metastases were treated initially with single agent chemotherapy and 38 achieved complete remission (77%). All of the remaining eight patients had control of peripheral metastases but were left with a focus disease in the myometrium (demon-

strated by arteriography) that appeared resistant to the systemic single agent approach. Four of these eight patients were treated by hysterectomy in conjunction with systemic chemotherapy, and four with arterially infused chemotherapy. All have entered complete remission.

Thus, of 49 patients with "good prognosis" metastatic disease, all achieved complete remission through varying the treatment regimens. Five of the 7 patients with "poor prognosis" metastatic disease successfully achieved remission with *initial* vigorous therapy, while three similar patients who were initially unsuccessfully treated by the more conventional methods then failed to respond to *secondary* vigorous therapy.

#### **DISCUSSION**

From the previous data one can appreciate that trophoblastic neoplasia often presents as a spectrum of clinical disease. Many physicians will immediately recognize the problem when malignant sequelae closely follow the termination of a hydatidiform mole. However, when such problems develop some interval after molar pregnancy, or follow other types of antecedent pregnancy, then the diagnosis may be overlooked. Such oversight denies the patient an excellent chance for recovery of even metastatic disease as delay predisposes to poor results of therapy. Any physician who cares for women in the reproductive years should consider these diagnoses when patients present with abnormal bleeding, menstrual irregularity or evidences of a metastatic process.

Early and accurate diagnosis can be achieved with frequent and regular use of precise and sensitive assays of human chorionic gonadotropin. High remission rates are dependent upon the use of such assays for vigorous, carefully controlled and complete therapy of these patients. Pregnancy tests, properly done and with dilutional quantification, are of major use *but only when positive*. When such tests are negative one must use an assay capable of measuring to pituitary gonadotropin levels. If these latter assays are not used, the diagnosis will be delayed in 30-35 per cent of patients. In addition, failure to utilize such techniques denies the physician of knowledge of the response to therapy during the critical last phases of therapy. Failure to treat until *all* HCG is eradicated will frequently allow the exacerbation of disease which is then

resistant to further treatment. Finally, the use of such sensitive assays will allow re-institution of therapy immediately upon exacerbation of disease and avoid the weeks to months delays until pregnancy test levels of HCG are again achieved.

Systemic, single agent chemotherapy with Methotrexate and Actinomycin-D remains the primary treatment modality for patients with gestational trophoblastic malignancies. The present study, however, helps to identify the role for combining chemotherapy and hysterectomy for selected patients. The categorization of patients with metastatic disease into "poor" and "good" prognosis groups is of aid in determining the initial method of therapy most likely to achieve remission with the least toxic hazard. The uses of arteriography for diagnosis and arterial chemotherapeutic infusion are now beginning to be identified and certainly seem to warrant further use. The role of prophylactic chemotherapy seems promising but requires further investigation to warrant exposure of large numbers of patients to such potent agents. Finally, all therapy must be carefully but vigorously continued until all HCG is removed.

One can only anticipate that the future will provide better agents and methods to further increase remission rates and reduce toxicity for patients with malignant trophoblastic disease. The demand for more rapid, readily available and less expensive HCG assays remains. Despite these future possibilities, however, it now appears that these diseases can be effectively controlled with methods currently available.

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#### REFERENCES

1. Sanger, M.: Zwei Aussergewöhnliche Fälle Von Abortus, *ZBL Gynak.* 13:132, 1889.
2. Marchand, F.: Über du Sogenannten "decidualen" Geschwülste in Anschluss an normale Geburt, *Abort Blasenmole und Extreuterin schwangerschaft,* Msch. *Geburtsh. Gynak.* 1:419-513, 1895.
3. Brewer, J. I.; Rinehart, J. J., and Dunbar, R.: Choriocarcinoma, *Am. J. Obst. & Gynec.* 81:574, 1961.
4. Brewer, J. I., Smith, R. T., and Pratt, G. B.: Choriocarcinoma, *Am. J. Obst. & Gynec.* 85:841, 1962.
5. Hertig, A. T. and Sheldon, W. H.: Hydatidiform mole — A pathologic-clinical correlation of 200 cases, *Am. J. Obst. & Gynec.* 53:1, 1947.
6. Hertz, R.; Lewis, J., and Lipsett, M. B.: Five years' experience with the chemotherapy of metastatic chorio carcinoma and related trophoblastic tumors in women, *Am. J. Obst. & Gynec.* 82:631, 1961.
7. Park, W. W.: Choriocarcinoma. A general review with an analysis of 516 cases, *Arch. Pathol.* 49:73, 205, 1950.
8. Taylor, E. and DroegeMueller, W.: Choriocarcinoma, choriadenoma destruens, and syncytial endometritis, *Am. J. Obst. & Gynec.* 83:958, 1962.
9. Novak, E. and Sean, C. S.: Choriocarcinoma of the uterus, *Am. J. Obst. & Gynec.* 67:933, 1954.
10. Green, R. R.: Choriadenoma destruens, *Ann. N. Y. Acad. Sci.* 80:143, 1959.
11. King, G.: Hydatidiform mole and chorion-epithelioma. The problem of the borderline case, *Roy. Soc. Med.* 49:381, 1956.
12. Park, W. W.: Modern Trends in Pathology, Butterworth, London, 1960.
13. Lewis, J.; Gore, H.; Hertig, A. T., and Goss, D. A.: Treatment of trophoblastic disease, *Am. J. Obst. & Gynec.* 96:710, 1966.
14. Hammond, C. B. and Parker, R. L.: The diagnosis and treatment of trophoblastic disease, *Obstet. & Gynec.* 35:132, 1970.
15. Dells, E.: Quantitative chorionic gonadotropin prognostic value in hydatidiform mole and chorionepithelioma, *Obst. & Gynec.* 9:1, 1957.
16. Hobson, B. M.: Pregnancy diagnosis, *J. Reprod. & Fert.* 12:33, 1966.
17. Hon, E. H.: A Manual of Pregnancy Testing, ed. 1, Little, Boston, 1961.
18. Klinefelter, H. F.; Albright, F., and Griswold, G. C.: Experience with a quantitative test for normal or decreased amounts of follicle stimulating hormone in the urine in endocrinological diagnosis, *J. Clin. Endocrinol.* 3:529, 1943.
19. Kottmeier, H. L.: Chorionepithelioma and the Aschheim-Zondek test, *Acta Obst. Gynaec. Scand.* 23:316, 1943.
20. Lucis, D. J. and Tannenbaum, H.: Observations on immunochemical assays of human chorionic gonadotropin, *Canad. Med. Assoc. J.* 93:1250, 1965.
21. Hammond, C. B.; Hertz, R.; Ross, G. T.; Lipsett, M. B., and Odell, W. D.: Primary chemotherapy for nonmetastatic gestational trophoblastic neoplasms, *Am. J. Obst. & Gynec.* 98:71, 1967.
22. Ross, G. T.: Personal communication.
23. Ross, G. T.; Goldstein, D. P.; Hertz, R.; Lipsett, M. B., and Odell, W. D.: Sequential use of Methotrexate and Actinomycin-D in the treatment of metastatic choriocarcinoma and related trophoblastic diseases in women, *Am. J. Obst. & Gynec.* 93:223, 1965.
24. Hertz, R.: Interference with estrogen-induced tissue growth in the chick genital tract by a folic acid antagonist, *Science* 107:300, 1948.

## NEWER CONCEPTS IN THE DIAGNOSIS AND THERAPY OF MALIGNANT TROPHOBLASTIC DISEASE

25. Hertz, R. and Lutiner, W.: Quantitative interference with estrogen-induced tissue growth by folic acid antagonists, *Endocrinol.* 44:278, 1949.
26. Thiersch, J. B.: Therapeutic abortions with a folic acid antagonist, 4-aminopteroylglutamic acid (4-amino P.G.A.) administered by the oral route, *Am. J. Obst. & Gynec.* 63:1298, 1952.
27. Li, M. C.; Hertz, R., and Spencer, D. B.: Effect of Methotrexate therapy upon choriocarcinoma and chorioadenoma, *Proc. Soc. Exper. Biol. Med.* 93:361, 1956.
28. Hertz, R.; Ross, G. T., and Lipsett, M. B.: Primary chemotherapy of nonmetastatic trophoblastic disease in women, *Am. J. Obst. & Gynec.* 86:808, 1963.
29. Ross, G. T.; Hammond, C. B., and Odell, W. D.: Chemotherapy for nonmetastatic gestational trophoblastic neoplasm, *Clin. Obst. & Gynec.* 10:323, 1967.
30. Bagshawe, K. D.: Trophoblastic tumors: Chemotherapy and developments, *Brit. Med. J.* 2:1303, 1963.
31. Brewer, J. E.; Gerbie, A. B.; Dolkart, R. E.; Skom, J. H.; Nagle, R. C., and Torok, E. E.: Chemotherapy in trophoblastic diseases, *Am. J. Obst. & Gynec.* 90:566, 1964.
32. Chan, D. P. C.: Chorionepithelium. A study of 41 cases, *Brit. Med. J.* 13:953, 1962.
33. Hreshchyshyn, M. M.; Graham, J. B., and Holland, J. F.: Treatment of malignant trophoblastic growth in women, with special reference to amethopterin, *Am. J. Obst. & Gynec.* 81:688, 1961.
34. Hung-Chao, S.; Pao-Chen, W., and Ts'ui-Hua, H.: Treatment of choriocarcinoma and chorioadenoma destruens with 6-Mercaptopurine and surgery, *Chin. Med. J.* 82:24, 1963.
35. Nystrom, C.; Hansen, H. A., and Sternier, I.: Methotrexate therapy in two cases of trophoblastic tumors of the uterus involving the lungs, *Acta Radiol.* 2:401, 1964.
36. Wilson, R. B., Beecham, C. T., and Symmonas, R. E.: Conservative surgical management of chorioadenoma destruens, *Obst. & Gynec.* 26:814, 1965.
37. Hammond, C. B.; Hertz, R.; Ross, G. T.; Lipsett, M. B., and Odell, W. D.: Diagnostic problems of choriocarcinoma and related trophoblastic neoplasms, *Obst. & Gynec.* 29:224, 1967.



### Coffee Worker's Lung: New Example of Extrinsic Allergic Alveolitis

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A 46-year-old man who worked for more than 20 years in a coffee-roasting factory developed diffuse lung lesions. Clinically there was impairment of diffusion. The histological patterns showed signs of extrinsic allergic alveolitis. Depositions of IgG, complement, and fibrinogen could be demonstrated along the alveolar capillaries by immunofluorescence. In the patient's serum there were circulating antibodies against an extract of coffee bean dust. On testing the skin of the patient an immediate weal appeared within ten minutes. In the biopsy of the weal there was a sharp deposition of complement in the vascular walls and a perivascular deposition of IgG. In analogy to other forms of extrinsic allergic alveolitis it seems justified to call this form "coffee worker's lung." The pathogenesis and characteristics of extrinsic allergic alveolitis are discussed.

### Value of Bed Rest in Patients With Rheumatoid Arthritis

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Forty-two patients with rheumatoid arthritis admitted to hospital for treatment were randomly assigned for a ten-week period to one of two treatment programs which were tailored to the patient's disease status and were as nearly alike as possible except for the amount of daily bed rest permitted. During the study the patients were evaluated by a group of visiting physicians who were not aware which of the programs was in effect. The rest program specified a minimum of 18 to 22 hours of bed rest/day. The activity program encouraged ambulation where possible and participation in ward activities. Twenty patients were assigned to bed rest and 22 to activity. Although all patients improved to a modest degree, there was no advantage demonstrated for one program over the other. No adverse effects of either program were found.

# The Arthritic Knee – Recent Advances in Management

Donald B. Kettelkamp, M.D.,\* Gerald S. Laros, M.D.\*\*

Recent and continuing progress in the treatment of arthritic knees permits an increasingly optimistic outlook for improved function and decreased pain. In the past, treatment was often limited to little more than aspirin, an occasional steroid injection, a cane, and the advice to "learn to live with it." Non-operative measures continue to occupy an important place in treatment but, during the past several years, better understanding of knee biomechanics and improved operative procedures have widened the spectrum of treatment. The purpose of this paper is to present currently available treatment for the arthritic knee.

In evaluating any arthritic joint, the physician must consider the severity of pain, the degree of functional impairment, the influence of disease in other joints, and concomitant medical problems. Goals in treatment are pain relief, joint stability and sufficient motion for activities of daily living.

Because functional expectation and modalities of treatment differ, degenerative and rheumatoid arthritis will be discussed separately.

## Degenerative Arthritis

Patients usually seek medical attention when slowly progressive disease passes the threshold of tolerance or because a minor twist or injury has caused an abrupt increase in pain. On initial evaluation, it is useful to categorize symptoms as due to intra-articular derangements or extra-articular malalignment.

Intra-articular problems include attritional tears and cystic degeneration of menisci, osteophytes, loose bodies, and patello-femoral arthritis. Attritional meniscus tears are fairly common in degenerative arthritis and often occur without specific trauma. The usual symptoms include aching pain, intermittent effusion and a sensation of "catching." However, pain, effusion, and catching may also accompany other intra-articular problems. Patello-femoral arthritis can produce

these symptoms if irregular joint surfaces pop and "catch" as they move against each other. Similar symptoms occur if a ligament "catches" as it moves over an osteophytic ridge, or if loose bodies briefly interfere with joint motion. Meniscal cysts may also masquerade as tears by producing joint line bulges and tenderness. There are, thus, a number of different intra-articular problems with somewhat similar clinical features which require diagnostic distinction for appropriate treatment.

Extra-articular malignment such as flexion contractures, genuvarum (bow-legs) and genu-valgum (knock knee), concentrate weight bearing forces on relatively small areas of articular surface. Such abnormal compression forces may cause pain or lead to further deformity. Patients with symptomatic varus or valgus deformities usually have more discomfort on the concave side of the deformity. In varus knees, for example, pain is usually most severe at the medial joint line, though lesser pain may be present laterally from increased tension on the lateral structures. In degenerative genu valgum, joint line pain is predominantly lateral while tension symptoms are along the medial collateral ligament. Varus and valgus deformities are demonstrated best by standing anterior-posterior roentgenograms (Fig. 1).



Figure 1.

These anterior-posterior roentgenograms demonstrate the value of weight bearing films in knee evaluation. The tibio-femoral relationship and joint space appear satisfactory on the non-weight bearing film. The weight bearing film demonstrates marked instability with varus angulation, tibial subluxation and loss of medial joint space. (Reprinted with permission of the J. of the Iowa Med. Soc.)

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**Treatment:**

If symptoms are mild, if no correctable intra-articular or extra-articular problem can be identified, or if surgery is precluded by patient's choice or general health, a specific program of non-surgical measures should be offered consisting of: (1) joint rest, (2) muscle exercises, (3) protection against progressive deformity, and (4) medication. The part that each of these four modalities play in the conservative management of knee arthritis depends upon the type of problem presented by the involved joint.

(1) Joint rest: The arthritic patient who presents with an acute episode of knee effusion and pain on weight bearing and who previously had unrestricted knee motion, needs rest for the joint. Severe discomfort may require a week of bed rest with the leg supported in a comfortable position. The knee should not be maintained in flexion on a pillow for long periods, however, since flexion contracture may develop. Plaster immobilization should usually be avoided because of the tendency for arthritic joints to rapidly lose motion. After acute pain and marked effusion subside or when pain and effusion were not severe enough to require bed rest initially, protected weight bearing can be provided with a walker or crutches. Under these circumstances, the patient is encouraged to maintain a nearly normal gait and to move the knee in a normal manner but with minimal weight bearing. The patient may then progressively increase weight bearing as symptoms permit. If no flexion contracture was present initially, weight bearing on a flexed knee is prohibited because flexion increases the articular force and because the knee is less stable in flexion. Protected weight bearing is continued until the effusion is gone, the patient can walk without a limp, and good quadriceps strength is regained by exercise.

(2) Exercises: Quadriceps exercises are the most important part of any knee rehabilitation program since they enhance stability and guard against recurrent effusion. Isometric exercises (muscle contractions without joint motion) are preferable in arthritic knees because muscle strength can be developed with less patello-femoral compression force than occurs with isotonic exercises (muscle contractions moving the joint against resistance).<sup>4,13</sup> Isometric exercise is done with the patient supine. The patient

contracts the quadriceps, elevates the heel of the foot at least 4 inches from the bed, couch or floor, holds the position to the count of 5, returns the leg to the floor, relaxes the muscle and then repeats the exercise (Fig. 2). The patient increases the number of repetitions until he is able to do twenty twice a day. The exercise is then done using a one-pound weight. Again, when the patient can do 20 repetitions twice a day, the weight is increased in one-pound increments. Most patients regain sufficient quadriceps strength to do 20 repetitions with 8-10 pounds. This degree of strength usually permits the patient to carry out daily activities. The level of strength can be maintained with exercises 4 or 5 times per week as long as a lapse in exercises does not exceed more than 2 consecutive days. Recurrent knee effusion, aching or discomfort lasting more than one-half hour to an hour after the exercise, usually indicates that the patient is trying to progress too rapidly. The number of repetitions should either be decreased or the amount of weight decreased or both and again gradually progressed to the 8 or 10 pound level.

(3) Protection against progressive deformity: A knee developing flexion contracture or medial-lateral instability can be supported by braces, protected by crutches, and/or strengthened by isometric quadriceps exercises. To specifically combat flexion contracture, the patient may stretch the posterior capsule of the knee as discomfort permits by lying on his abdomen so the bed strikes the thigh just above the knee and with the knee hanging unsupported. This should be done for a total of one hour daily in 10-30 minute sessions. The duration of each session is



Figure 2.  
Isometric quadriceps exercises. The patient lays on his back, tightens the quadriceps, lifts the leg about four inches off the bed, holds for the count of five, and returns the leg to the bed. (Reprinted with permission of the J. of the Iowa Med. Soc.)

determined by the occurrence of more than slight discomfort. If this exercise produces pain quickly, it should be postponed for a time.

(d) Medication: Drug therapy is of less importance than the other modalities in degenerative arthritis, but does have a role. Aspirin is the most useful drug. For intermittent pain, 10 gr. of aspirin as needed may suffice. For more persistent pain, 10 gr. after meals and at bedtime, 4 times daily, is prescribed. The maximum total dose of aspirin can be reliably regulated by decreasing the dosage when tinnitus or acute decrease in hearing occurs. Acetaminophen preparations (e.g., Tylenol 2-3 tablets, 4 times daily), may be used by patients who do not tolerate aspirin. Plain Darvon 65 mgm. also produces some relief of more troublesome pain. Indocin may be of benefit when the symptoms are primarily related to a reactive synovitis or local inflammatory response.

The intra-articular injection of cortico-steroids is seldom indicated in degenerative arthritis, although it may offer some temporary relief if inflammation is a factor in the production of symptoms. Repeated use of intra-articular cortisone, however, carries significant risk of introducing microorganisms into the joint while lowering resistance to infection. There is also risk of steroid induced joint disintegration. Systemic cortico-steroids have no place in degenerative joint disease.

In the operative treatment of degenerative arthritis of the knee, two procedures currently are widely used. Limited joint debridement is occasionally useful when *specific intra-articular pathology* can be identified as the primary cause of discomfort. This type of surgery includes excision of loose bodies and degenerated or torn menisci, trimming of osteophytes and local synovectomy.

The greatest advance in the care of degenerative arthritis of the knee is proximal tibial osteotomy for degenerative genu varum and genu valgum. In degenerative genu varum, for example, the weight bearing forces pass primarily from the medial femoral condyle to the medial tibial plateau instead of the more normal distribution to both tibial plateaus. (Fig. 3). The concentrated force across the medial side of the knee considerably exceeds normal and results in bone attrition (loss of the bone from the medial tibial plateau and to a lesser degree from the



Figure 3.  
Anterior-posterior weight bearing roentgenograms show loss of medial joint space and a varus tibiofemoral angle. Post operative weight bearing films show correction to a valgus tibiofemoral angle. This patient was able to return to moderate farming activities.

medial femoral condyle). Articular cartilage from the medial femoral condyle and medial tibial plateau is worn away. Usually the articular cartilage on the lateral femoral condyle and the lateral tibial plateau are of normal or near normal thickness. The proximal tibial osteotomy is designed to redistribute the forces passing through the knee so that the lateral side assumes more transmitted force and the medial side is relieved. The osteotomy is performed just above the insertion of the patellar tendon. At this site bone healing usually requires no more than six weeks of plaster immobilization. In at least 70% of these cases the patient obtains sufficient symptomatic relief to permit the preoperative level of activity with less pain or significantly increased activity before reaching the preoperative pain level.

Implant arthroplasty (described below for rheumatoid arthritis) is usually not suitable for degenerative disease, although occasionally elderly patients with degenerative genu varum or valgum can be treated with a tibial plateau prosthesis.

### Rheumatoid Arthritis

Although the same non-operative modalities are useful in the treatment of rheumatoid arthritis, their relative importance is considerably different than in degenerative disease. Rheumatoid arthritis is a systemic disease and, hence, first priority in treatment is a comprehensive program to control the disease by medical management which is beyond the scope of this paper.

There are two primary functional goals in the non-operative orthopaedic management of the rheumatoid knee. The first is to maintain a range of motion and the second is to prevent fixed deformity. Pain is the usual culprit in producing both loss of motion and deformity, but complete pain relief is not within our capability. Range of motion exercises should be performed on a daily basis and the range of motion should be recorded on each patient visit. Pain with weight bearing plus quadriceps weakness lead to a flexed knee stance, loss of knee motion during walking and a posture with thighs together, knees in flexion and valgus, and feet externally rotated during standing.<sup>10</sup> The patient should be instructed to avoid these positions. Partial weight bearing with crutches as dictated by pain will permit the knee to function in a more normal manner and avoid detrimental gait patterns. The patient should avoid prolonged sitting and avoid support of the knee in a flexed position in bed. Bracing and/or crutches may be used to prevent progressive deformity.

Isometric quadriceps exercises as described for degenerative arthritis and active range of motion exercises should be done as tolerated by the patient throughout the course of the disease.

Operative treatment of the rheumatoid knee includes synovectomy and various arthroplasties.

Synovectomy, probably the most common operative procedure for rheumatoid arthritis of the knee, is an old procedure whose popularity has waxed and waned over the past thirty years.<sup>5</sup> It serves to relieve pain in the joint for varying periods of time. Pain is a major factor causing alterations in rheumatoid knee function during walking.<sup>10</sup> These alterations consist of decreased flexion-extension during both stance and swing phases of gait and have the potential effect of increasing force transmission across the joint during weight bearing.<sup>4</sup> Force concentrations may contribute to loss of articular cartilage as in

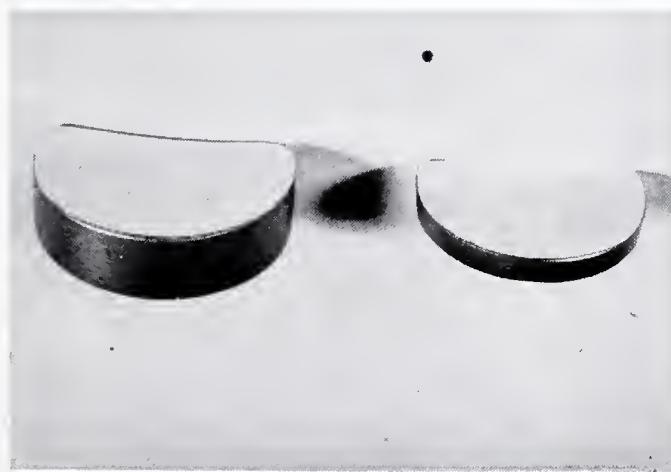
degenerative arthritis. Early synovectomy has been proposed to prevent articular surface destruction by diseased synovium, but, to date, there is insufficient evidence to document the value of prophylactic synovectomy. There is evidence that the new synovial lining formed after synovectomy once again becomes involved by rheumatoid disease although frequently to a lesser degree.<sup>5,6</sup> The usual indication for prophylactic synovectomy is chronic synovitis persisting for six months or more in spite of appropriate medical management without evidence of articular destruction in the joint.<sup>6</sup> Until the value of prophylactic synovectomy is better established, however, we believe synovectomy should be used primarily to relieve pain and to allow more normal usage of the joint. It is also indicated in association with implant arthroplasty when thick boggy synovium is encountered.

Arthroplasty of the rheumatoid knee has advanced considerably in the last few years. Three types of implant arthroplasty are currently in use. They are based on replacement of tibial plateaus, femoral condyles, or both. Each operation has specific indications and limitations.

Tibial plateau replacement is currently the most widely used form of knee arthroplasty, with the MacIntosh design being the most common plateau prosthesis.<sup>11,12</sup> This arthroplasty consists of replacing the medial, lateral or both plateaus with half circle pieces of metal (Fig. 4). Synovectomy is usually done if there is significant synovitis but collateral and cruciate ligaments are left intact to maintain stability. When wearing away of one or both tibial plateaus results in an unstable knee, these prostheses fill the gap produced by bone loss and restore stability. The prosthesis provides a smooth concave articular surface for movement of the femoral condyles. This type of arthroplasty is most useful when bone loss is predominantly tibial. It generally reduces weight bearing pain and results in a stable knee with 90 degrees or more of flexion. Some pain may recur with time, probably related to recurrent synovitis in the regenerated synovial membrane.<sup>5</sup> This mode of arthroplasty is contraindicated if rheumatoid disease has produced a posterior subluxation of the tibia on the femur, when flexion contracture exceeds 30 degrees, or if the collateral ligaments have been destroyed by disease.

A second type of arthroplasty replaces femoral condyle surfaces, usually in conjunction with synovectomy. The MGH (Massachusetts General Hospital) prosthesis is in common use for this purpose. It consists of a shallow metal cup for each condyle joined to a long metal stem which inserts into the femoral medullary canal (Fig. 5).<sup>8</sup> A gap between the cups allows preservation of cruciate ligaments and the collateral ligaments must also be left intact. This arthroplasty is useful in those patients with disease involving predominantly the femoral condyles but with level tibial plateaus (that is, no varus, valgus instability). It can be used when flexion contracture up to 60 degrees is present. It offers good pain relief but less motion (60 to 90 degrees of flexion-extension) than tibial plateau prostheses. The femoral prosthesis can be used with a minor degree of tibial plateau disease when a flexion contracture of 30 to 60 degrees contraindicates tibial plateau arthroplasty.

The third type of arthroplasty, also usually coupled with synovectomy, replaces both tibial and femoral joint components with a metal hinged prosthesis held in place by intramedullary stems (Fig. 6)<sup>14</sup> Some prostheses of this type are designated by the names of Walldius, Young or Shiers. This total knee arthroplasty is applicable only to joints which are so badly destroyed (usually with both femoral and tibial involvement) that the only alternative to relieve pain and provide stability would be knee fusion. The procedure can be used in knees with subluxation, destroyed ligaments and up to 60 degrees of flexion contracture. Successful surgery relieves pain, provides medial-lateral stability and allows



Photographs of two MacIntosh tibial plateau prostheses and pre- and post-op roentgenograms. This patient with rheumatoid arthritis had become non-ambulatory with recurrent post-surgical synovitis



Figure 4.

and loss of joint space. Repeat synovectomy and plateau prosthesis permitted walking and light household activities.

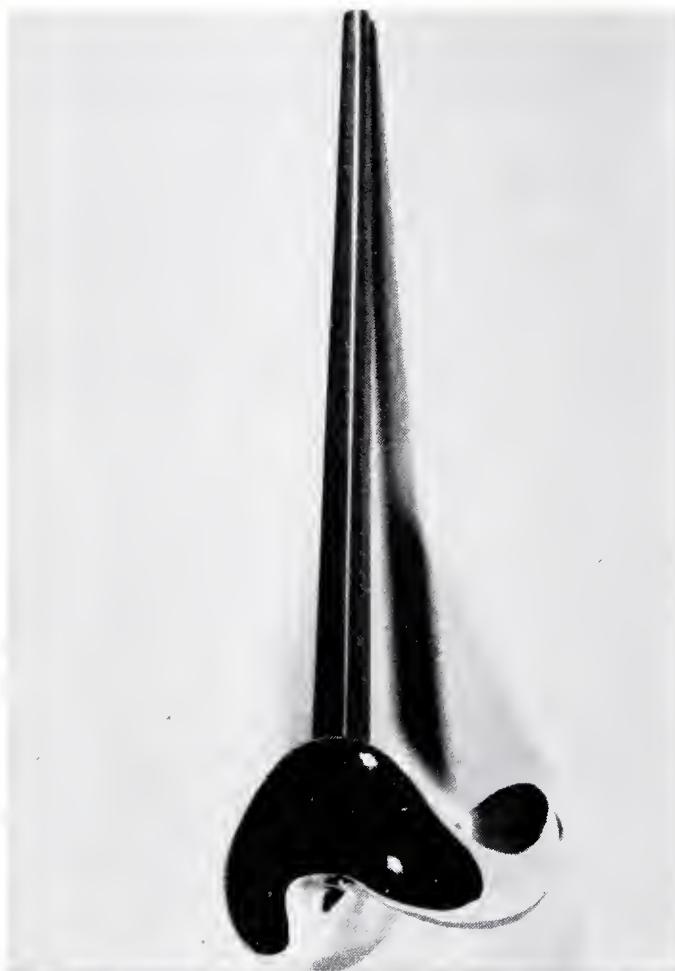


Figure 5.  
Photographs of MGH (Massachusetts General Hospital) prosthesis and pre- and post-operative roentgenograms from a patient. (Reprinted with permission of the J. of the Iowa Med. Soc.)



Figure 6.  
Photographs a Walldius total knee prosthesis and pre- and post-operative roentgenograms. This man was able to return to light activities without external support.

70 to 80 degrees of flexion. It cannot be expected to do more than permit a crippled arthritic to improve the level of activities of daily living. A major disadvantage of hinged prostheses is the absence of the physiologic rotation demanded for normal knee motion. As a result, bone resorption usually occurs around the medullary stems. A total knee replacement is contraindicated in a vigorous young patient who expects to use the knee very actively in work or recreation.

A major limitation of currently available implant arthroplasties is that none permit the full use expected by younger, more active and mildly disabled patients. These arthroplasties are of immeasurable help in severely handicapped patients whose use requirements are self care and limited ambulation about the home.

The rapid change now occurring in the field of implant knee arthroplasty reflects the attempts to overcome limitations in implant design. At least two new types of total knee replacements utilizing methyl methacrylate cement will be available by the summer of 1972.<sup>2,3,7</sup>

### SUMMARY

A better understanding of knee biomechanics and recent surgical advances provide new opportunities for functional improvement of the patient with degenerative or rheumatoid arthritis of the knee. The orthopedist experienced in this field can determine the best choice of procedure in those patients which can benefit from surgery. The arthritic patient must still "live" with his disease, but there is now potential for his living with both more comfort and more mobility.

### REFERENCES

1. Coventry, M. B.: Osteotomy of the Upper Portion of the Tibia for Degenerative Arthritis of the Knee. A Preliminary Report. *J. Bone and Joint Surg.*, 47-A: 984-990, July 1965.
2. Coventry, M. B.; Riley, L. H., Jr.; Turner, R. H.; and Upshaw, J. E.: Geomedic Knee Assembly for Total

Knee Arthroplasty. Scientific Exhibit, Amer. Acad. Orthop. Surg., Washington, D. C., Jan. 29-Feb. 2, 1972.

3. Fitzgerald, R. H., Jr.; Peterson, L. F. A.; and Bryan, R. S.: A Biomechanical Analysis of the Polycentric Total Knee Arthroplasty. Orthopaedic Research Society Meeting, Washington, D. C., Jan. 27, 1972.
4. Ford, W. R., Jr.; Perry, J.; and Antonilli, D.: Analysis of Knee Joint Forces During Flexed Knee Stance. Orthopaedic Research Society Meeting, Washington, D. C., Jan. 27, 1972.
5. Geens, S.: Synovectomy and Debridement of the Knee in Rheumatoid Arthritis. Part I. Historical Review. *J. Bone and Joint Surg.*, 51-A: 617-625, June 1969.
6. Geens, S.; Clayton, M. L.; Leidholt, J. D.; Smyth, C. J.; and Bartholomew, B. A.: Synovectomy and Debridement of the Knee in Rheumatoid Arthritis. Part II. Clinical and Roentgenographic Study of Thirty-One Cases. *J. Bone and Joint Surg.*, 51-A: 626-642, June 1969.
7. Gunston, F. H.: Polycentric Knee Arthroplasty. *J. Bone and Joint Surg.*, 53-B: 272-277, May 1971.
8. Jones, W. N.; Aufranc, O. E.; and Kermond, W. L.: Mold Arthroplasty of the Knee. *J. Bone and Joint Surg.*, 49-A: 1022, July 1967.
9. Kettelkamp, D. B.; and Chao, E. T. S.: A Method for Quantitative Analysis of Medial and Lateral Compression Forces at the Knee During Standing. *Clin. Orthop.* (Accept for publication).
10. Kettelkamp, D. B.; Leaverton, P. E.; and Misol, S.: Gait Characteristics of the Rheumatoid Knee. *Arch. Surg.*, 101: 30-34, Jan. 1972.
11. MacIntosh, D.; and Hunter, G. A.: The Uses of the Hemiarthroplasty Prosthesis in the Management of Advanced Osteoarthritis and Rheumatoid Arthritis of the Knee. Amer. Acad. Orthop. Surg. Meeting, San Francisco, Mar. 11, 1971.
12. Potter, T. A.; Weinfeld, M. S.; and Thomas, W. H.: Arthroplasty of the Knee in Rheumatoid Arthritis and Osteoarthritis. *J. Bone and Joint Surg.*, 54-A: 1-21, Jan. 1972.
13. Smidt, G. L.: Biomechanical Analysis of Knee Flexion and Extension. Orthopaedic Research Society Meeting, Washington, D. C., Jan. 27, 1972.
14. Walldius, B.: Arthroplasty of the Knee Using an Endoprosthesis. 8 Years' Experience. *Acta Orthop. Scand.*, 30: 137-148, 1960.

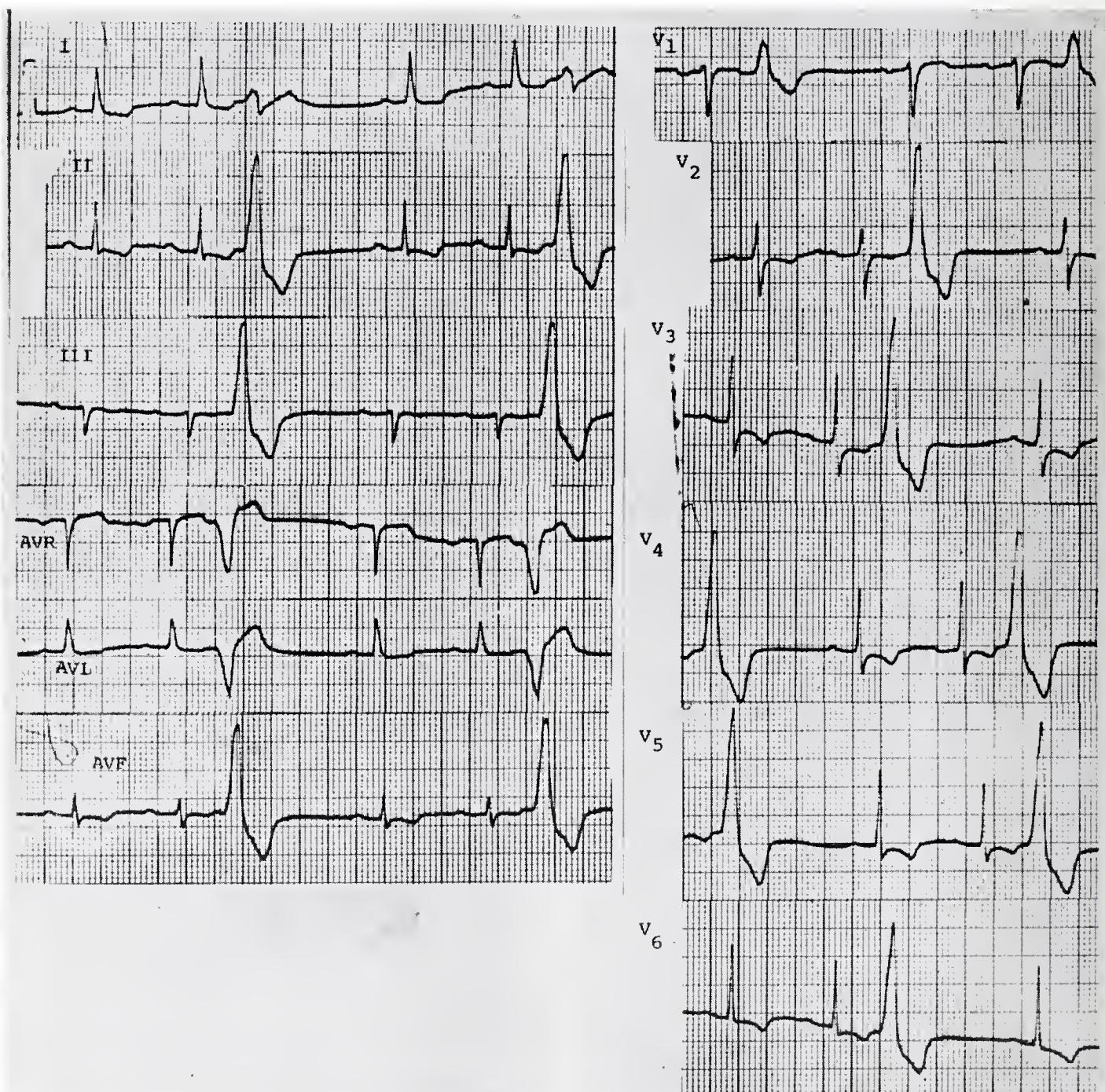


# ELECTROCARDIOGRAM

# OF THE MONTH

76-year-old black female with probable digitalis intoxication . . . now on Dilantin 100 mg p.o. every 6 hours.

See Answers on Page 73



The Department of Cardiology, University of Arkansas Medical Center  
John E. Douglas, M.D.



## Arkansas—Venereal Disease

Except for the common cold, no communicable disease affects more American men and women than venereal disease. It can permanently damage and kill a victim or unborn fetus if left untreated.

The Venereal Disease Section of the Division of Communicable Diseases, Arkansas State Department of Health, is charged with operation of venereal disease control activities in the State. Its chief function is to provide epidemiologic services to Arkansas, although it also engages in private physician visitation, education, reactor follow-up and research.

Venereal disease epidemiology consists of two basic elements: contact interviewing and contact investigation. Every reported case is interviewed and reinterviewed for sex contacts, acquaintances and associates, regardless of the reporting source. These named contacts and suspects are then located and referred to Local Health Departments or private physicians for examination.

Currently there are three venereal disease clinics in Arkansas. The central clinic is located at the University of Arkansas Medical Center and is operational Monday through Friday from 8 a.m. to 10 a.m.; the second clinic is at Little Rock City Health Department on Monday evening from 5 p.m. to 8 p.m.; the third clinic is held Monday through Friday from 9 a.m. to 4 p.m. in the Sebastian County Health Department.

There are eight State and Federal venereal disease investigators working out of the State Health Department in cooperation with doctors and public health nurses in the counties.

Public health nurses and public health advisors are responsible for several areas of venereal disease control. The public health advisor will do contact interviews, contact investigation,

epidemiologic procedures and arrange for examination and treatment, when appropriate, by private physicians or local venereal disease clinicians; obtain blood samples, when indicated, perform darkfield examinations, provide post treatment follow-up — serology at three months, six months and annually and work with Local Health Departments and private physicians concerning venereal disease problems.

All nurses, no matter where they are employed — school, clinic, hospital, industry or public health — share responsibilities in venereal disease control. They cooperate with public health workers in epidemiological investigations to find infected persons, their source and persons they may have infected. Nurses assist infected persons in obtaining adequate treatment and necessary supervision following treatment.

Because of the relationship the school nurse has with the family she is in a position to gain the family's confidence and provide guidance and assistance. Not only the diseases but emotional problems and implications for later adulthood among adolescents demand understanding.

Nurses arrange for diagnosis and/or treatment of persons with an infectious venereal disease. They may obtain blood samples, arrange for darkfield examinations or arrange for a public health advisor to do contact investigations. Nurses also do follow-up of infants born of syphilitic mothers; follow-up contacts of infectious patients; follow-up of prenatals with lesions or reactive VDRL; investigate and bring to examination female contacts of gonorrhea; case-finding and follow-up of ophthalmia neonatorium; assist indigents in obtaining venereal disease treatment and promote venereal disease education.

Venereal diseases have reached a high that hasn't been experienced since 1957 and the case count continues to rise. The United States is entering its sixth year of a gonorrhea epidemic which some experts have termed "pandemic". Man is the reservoir of infection with sexual promiscuity basic to the spread of venereal disease. Most infections are transmitted heterosexually, but homosexual transmission should not be overlooked.

Only three areas — Illinois, Pennsylvania and the District of Columbia are projecting a decrease in venereal disease cases since 1970.

Arkansas, however, is not experiencing a decrease. The State currently ranks seventh and eighth in the nation in syphilis and gonorrhea, respectively.

In 1954 there were 27 cases of primary syphilis reported; in comparison, 247 cases were reported by the end of 1971; the first two months of 1972 recorded 51 cases.

Infection with untreated syphilis may lead to the development of some resistance to subsequent infection but treated persons can be reinfected. Infection with gonorrhea offers no immunity to subsequent infections.

Statistics on gonorrhea are much more shock-

ing. In 1954 there were 1,553 reported cases; a rise in 1960 to 8,704 cases; a decrease by 1967 to 5,930; and at the end of 1971 the number of reported cases totaled 7,949; the totals for January and February 1972 were 691 and 764 respectively.

Much to the dismay of investigating officials, members of the medical profession do not always report cases of venereal disease that they treat. Doctors often treat women for a disease other than venereal because of a lack of definite symptoms or because symptoms displayed closely resemble other diseases. This allows the disease to progress.

Some doctors still use the "gram stain smear" instead of using a cotton swab transfer to a culture. The gram stain is fairly accurate for males but will only detect three out of ten female cases. For females, a culture plate is usually 70 to 90 percent accurate.

As gonorrhea and syphilis continue to rise, services provided by the State Health Department must expand. Action against venereal disease in Arkansas is long overdue. To offset the shortage of diagnosis, treatment and education the Arkansas State Department of Health is planning a Statewide assault on venereal disease. The new Program will be aimed at infected females who are unaware they have the disease.



## THINGS TO COME

### Coronary Care Courses Offered

The University of Arkansas Medical Center and the Arkansas Regional Medical Program are planning to present the basic course in Coronary Care for physicians (Dr. Davis' five day course) in the fall of 1972. Any interested physicians may contact the Department of Continuing Education.

Physicians interested in attending a one or two day seminar in Coronary Care this fall may also contact the University of Arkansas Medical Center, Department of Continuing Education, specifying either basic or advanced course.

### Cancer Chemotherapy Conference Scheduled

The 10th Annual Cancer Chemotherapy Conference will be held at the University of Wisconsin, Madison, Wisconsin, September 6th through 8th. For information contact Dr. G. Ramirez, 714C University Hospitals, Madison, Wisconsin 53706.

### American Academy of Ophthalmology and Otolaryngology to Meet

During the week of September 24-28, the American Academy of Ophthalmology and Oto-

## THINGS TO COME

laryngology will hold its annual meeting at the Convention Center in Dallas, Texas. For further information contact C. M. Kos, M.D., Executive Secretary-Treasurer, American Academy of Ophthalmology and Otolaryngology, 15 Second Street, S.W., Rochester, Minnesota 55901.

### Medicine-Religion Symposium

A Statewide meeting of physicians and ministers is scheduled for October 28th at the University of Arkansas Medical Center. Dr. Milford O. Rouse of Dallas, Texas, and Dr. Richard Halverson of Washington, D. C., will be the keynote speakers.

### Conference on "The Battered Child" to Be Held

A conference on the Innovative Approaches to Prevention and Treatment of the Battered Child Syndrome and Development of Community Programs will be held November 27 and 28, 1972, in the Humphreys Postgraduate Center of the University of Colorado School of Medicine, Denver, Colorado. For further information write

the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colorado 80220.

### International Symposium

The First International Symposium on Emergency Medical Services, sponsored by the American Paramedical Institute, will be held July 31-August 4, 1972, at the Mid-Pacific Conference Center at the Hilton Hawaiian Village Hotel in Honolulu, Hawaii. For additional information contact ISEMS Coordinator, American Paramedical Institute, Post Office Box 4496, Honolulu, Hawaii 96813.

### Postgraduate Course

The American Society for Gastrointestinal Endoscopy will present a postgraduate course in "Clinical Gastroenterology" September 10 through September 16, 1972, at the Castle Harbour Hotel in Bermuda. For additional information contact Vernon M. Smith, M.D., Director, 301 St. Paul Place, Baltimore, Maryland 21202.



## PROCEEDINGS OF SOCIETIES



The Pulaski County Medical Society has donated \$1,800 to "Operation Reach," a drug abuse prevention program developed by the Boy Scouts of America. The goal of the program is to encourage young people to take a stand against experimenting with drugs.



### ANSWER—Radiology Case of the Month

This tracing demonstrates the fixed coupling interval for premature beats, characteristic of echo or re-entry origin, rather than from a spontaneously firing ectopic focus. Further evidence for this etiology for these abnormal beats may be found in the relationship of the PR intervals to the extra-beats. On previous tracings this patient's PR interval was consistently about 0.23 sec. and she had more of a bigeminal pattern. On this tracing, the PR interval for the first beat of the triplet is 0.17 to 0.18. The PR interval for the 2nd beat of the triplet is prolonged at 0.23 sec. This beat is then followed by the premature ventricular beat. One may therefore postulate that the prolongation of the PR interval reflects or permits fragmentation of the depolarization wave front so that the 2nd beat (2nd QRS complex) re-enters the His-Purkinje system, finds it only partially repolarized and produces the aberrated 3rd QRS complex. There is also abnormal straightening and depression of the ST segment, along with T wave inversion, most prominent in the lateral precordial leads. The former may result from digitalis, the latter rarely if ever does, and probably signifies ischemia of the left ventricle.



## EDITORIAL

### Sidelights on Anemia

Alfred Kahn, Jr., M.D.

The American Medical literature has often been criticized as somewhat sterile because of the failure of its medical journals to publish articles which theorize and speculate—and this is probably a truth. On the other hand, the British Medical Journal encourages ruminative, thoughtful papers on unproved hypotheses. A case in point is an article entitled "Aplastic Anemia: A Disorder of the Bone Marrow Sinusoidal Microcirculation rather than Stem-Cell Failure" by Knospe and Crosby (Volume 1, page 20, January 2, 1971). As the authors point out the commonly held idea of the etiology of aplastic anemia is that stem cells in the bone marrow fail to reproduce; a second possibility is that "Destruction of the unique stromal and vascular microcirculation may also stop blood cell production." Several experiments tend to prove this point. For example, irradiation which destroys the marrow stem cells, but leaves the stroma and microcirculation intact soon becomes active again because intact stem cells from elsewhere replenish the marrow where the stroma and circulation are intact. If enough irradiation were given to destroy the sinusoids as well as the stem cells, no recovery ensued. If the marrow in a limb is locally destroyed and curetted, no new marrow formed spontaneously but marrow will grow if it is transplanted to the curetted limb—as sinusoidal tissue will re-form. They compare bone marrow to seed and soil; both are necessary for growth; in this case the soil is the stroma and microcirculation and the seed are the stem cells. In some cases, aplasia of the marrow seemed to result from an immune reaction, which injured the sinusoids and this may be an important factor in human cases: some of the original work on this was done by Nettleship.

The anemia of chronic diseases has been a medical problem of serious proportions. It has some specific characteristics including a decreased plasma iron, decreased iron binding capacity, slowed release of iron by the reticuloendothelial cells, decreased red cell survival, and poor red cell production; all of this is considered in a paper by Ward Kurnick, and Pisarczyk (*Journal of Clinical Investigation* Volume 50, Page 332, February, 1971). They additionally have studied the "Serum Level of Erythropoietin in Anemias associated with chronic infection, malignancy, and primary Hematopoietic Disease. The level of Hematopoietin was roughly proportional to the level of the anemia in primary hematopoietic disease and iron deficiency anemia. There was no correlation between the anemia of patients with chronic infection and malignancy and the level of erythropoietin; the erythropoietin levels were elevated in only 11 of 31 patients in this latter group. The authors have speculated at the relatively low level of erythropoietin in malignancy and chronic infection may represent an artifact—as by some blocking factor that inhibits the bioassay of erythropoietin. They further suggest that malignancy and chronic infection anemias could reflect either a rapid turnover of erythropoietin or impaired synthesis.

The cause of leukemia is still a mystery. A recent case report by Fialkow, Bryant, Thomas, and Neiman (*Lancet*, Volume 1, Page 251, February 6, 1971) provokes the possibility of a virus cause. Previous reports have indicated that in patients with massive total body irradiation, leukemia recurred despite transfusion of isogeneic marrow. The case of Fialkow, et al. is of interest because their leukemic patient was a 16 year old girl, who underwent supra-lethal total body irradiation; she

was then transfused with marrow from her brother. The marrow transfusion was successful, but the leukemia recurred. The important point was that the leukemic cells had XY Chromosomes indicating that they were derivatives of the brother's marrow; the patient had no XY chromosomes before the transfusion. These investigators suggest that the virus-like agent in the patient may have been transferred to the donor cells.

Mutual incompatibility of drugs is not common and mixtures of medications are given regularly. Once in a while an important incompatibility is discovered as the simultaneous use of salicylates and certain anti-coagulants. Tetracycline drugs are currently widely used in infections and to obtain good results adequate level has to be

reached in the blood. Neuvonen, Gothoni, Hackman and Bjorksten (British Medical Journal, Volume 2, Page 532, November 28, 1970) studied the effects of orally administered iron on Tetracycline blood levels. They administered 500 mg. of Tetracycline and obtained serum level of 2.9 ug per c.c. When this dose was administered with 200 mg. Ferrous sulfate, there was a decrease of 40% to 50% in the blood level. They state that iron binds with Tetracyclines in equimolar ratios. Iron inhibits the absorption of Tetracyclines from the gut and Tetracycline inhibits the absorption of iron. It is suggested that iron be given to patients, who are taking tetracycline, and be administered cautiously on a different time schedule than Tetracycline or not at all.



## MEDICINE IN THE



### THE MONTH IN WASHINGTON

The American Medical Association protested again to the federal Price Commission that the Administration's economic stabilization program is discriminatory as it applies to physicians.

A detailed statement outlining the AMA's position was sent to the Price Commission March 27 by Dr. Max H. Parrott, chairman of the AMA Board of Trustees, in response to the commission's announcement in the Federal Register that it was seeking a general review of its policies.

The AMA statement emphasized that the Association supports President Nixon's efforts to curb inflation. But, the AMA said, physicians are "very much concerned that the economic restrictions imposed upon them do not have equal application to all segments of the economy."

The AMA recommended that the Price Commission establish a Health Industry Council or Committee with representatives of the AMA and other health associations as members.

"Such a committee could provide a direct conduit to the Price Commission of the resources,

expertise and experience of its members," the AMA said. Through such a committee the Price Commission would have access to in-depth information accumulated by professional associations in the health care field. Furthermore, a direct channel of communication between the staffs of these organizations and the staff of the Price Commission would provide the Price Commission with assistance not otherwise obtainable.

The AMA expressed confidence that its statement reflected the concern of all physicians regarding the operation of the price control program as it applied to their services. The statement concluded:

"We believe that the comments and suggestions made in this statement reflect the concern of all physicians regarding the present operation of the price control program as it relates to their services. Accordingly, we urge the Price Commission to eliminate the discriminatory rules which single out physicians and other non-institutional providers of health care. We also call upon the Price Commission to foster a simpler, more equitable

system for the enforcement of price controls and the processing of applications for exceptions. An application for an exception not processed within twenty days should be deemed to be approved."

The AMA statement pointed out that professional fees, such as lawyers', outside the health profession were not subject to limitations and that "manufacturers, retailers and sellers of services generally are entitled to full pass-through of their increased costs."

The AMA statement continued:

"Of all sellers of commodities and services, only physicians (and other non-institutional providers of health care) are restricted to an aggregate price increase of 2.5% a year in passing through increased costs. We do not believe that this discriminatory restriction is necessary to curb the rate of inflation. If indeed such a restriction were needed, the most effective application would be in those segments of the economy which command the bulk of the consumer's dollar — food, clothing and housing.

"The regulations divide health care providers into institutional providers and non-institutional providers for price control purposes. This is an artificial and irrational distinction which should be abolished. The plain fact of the matter is that institutional providers frequently provide all, and always provide some, of the kind of services which non-institutional providers sell . . .

"We are convinced that the special restrictions in the regulations applicable to physicians (and other non-institutional providers) will make no meaningful contribution to the goals of the Price Commission and as a matter of principle should be eliminated. Physicians should be encouraged to invest in new facilities and technology which will elevate the quality of medical care. The 2.5% limitation on the pass-through of additional costs discourages such investments.

"The Economic Stabilization Act requires that the President issue standards to serve as a guide for determining prices, such standards to be generally fair and equitable. The regulations provide for an application for an exception or exemption if the economic stabilization regulations and guidelines will result in serious hardship or gross inequity. However, the regulations do not provide any criteria or standards to be applied when a physician seeks an exception because of 'serious hardship or gross inequity'. We believe that serious hardship or gross inequity is involved

where a physician has not increased his fees to keep pace with those charged by his colleagues. Many physicians have held the line on fees despite rising costs. They have delayed raising their fees and in some instances physicians have not increased their fees for several years. We believe that these physicians should not be penalized by being frozen to a substandard level of fees.

"Standards for exceptions to the price regulations should include provisions for physicians to raise their fees under circumstances such as the following:

1. Where the price charged for a particular service or services is significantly lower than that most commonly charged in the same community by the same class of providers of health services. Example: A physician specializing in internal medicine whose charge for a routine office visit is significantly less than that most commonly charged by other physicians specializing in internal medicine in the same community.
2. Where the price charged for a particular service or services is significantly lower than that most commonly charged in similar nearby communities by the same class of providers of health services and the applicant is the only one or one of a few in the same class of providers of health services in the same community. Example: The only ophthalmologist in a community whose charge for an eye examination for prescription glasses is significantly less than that most commonly charged by ophthalmologists in similar nearby communities.
3. Where the price charged by the applicant is the price most commonly charged in the community, or less, for a particular service or services and is substantially less than that most commonly charged in nearby communities because of substandard sociological or economic conditions that exist in the applicant's community. Example: A physician practicing medicine in a ghetto area in which the increase in fees during the past four or five years has not kept pace with increases that have generally taken place in nearby communities which have not been subject to such substandard conditions."

\* \* \*

More than 80 members of the House and

Senate introduced legislation that would establish a separate Department of Health, a proposal advocated by the American Medical Association for a century.

Chief co-sponsors were a former secretary of Health, Education and Welfare, Sen. Abraham A. Ribicoff (D-Conn.), and the chairmen of two key health subcommittees, Sen. Edward M. Kennedy (D-Mass.) and Rep. Paul G. Rogers (D-Fla.). Twenty-four Democratic senators and 60 representatives, 54 Democrats and 6 Republicans, had signed the bill when it was introduced. Additional sponsors were expected to be added later.

The legislation, which would break up HEW into three departments ran counter to President Nixon's plan for government reorganization. His plan calls for merger of HEW into a new, even bigger Department of Human Resources. Introduction of the separate health department legislation coincided with Nixon's sending of a second special message to Congress urging action on his reorganization proposal.

Some sponsors of the health department bill indicated they might compromise on two departments — one for health and welfare and one for education.

The AMA House of Delegates in 1873 adopted a resolution calling for a separate federal department "as a means of promoting sanitary science and the protection of the public health". In 1891, the delegates approved appointment of a committee "to memorialize Congress at its next session on the subject of creating a cabinet officer to be known as the medical secretary of public health."

Through the years, the House of Delegates has reaffirmed this position, the most recent such action having been in December, 1970, when this resolution was adopted:

*"Resolved, That the American Medical Association, in the public interest, continue its efforts to bring about the creation of a separate federal Department of Health, whose chief officer would be a physician of cabinet rank."*

"HEW, as presently structured, is unwieldy, unmanageable and therefore unresponsive to both the executive and legislative branches," Ribicoff said in a Senate speech. "No secretary can know what is going on in such a huge department, much less maintain control of the operation and policy-making apparatus of such a bureaucracy."

"As a former secretary of HEW, I am convinced that health policy can be more rationally developed and the health programs of our nation better handled if they are placed under the jurisdiction of one agency of manageable size, a department of health."

Ribicoff pointed out that HEW, since its establishment in 1953, has "grown into a bureaucracy of 108,000 employees" with an annual budget of nearly \$79 billion, one-third of the entire federal budget. It allocates \$18 billion of the \$25 billion the government spends each year on health programs that are scattered among 23 other agencies as well as HEW, he said.

His proposal, if enacted, would transfer all health responsibilities of HEW — including administration of Medicare and Medicaid — to the new department immediately. The President would be authorized to transfer health-care functions of other agencies to the department within 180 days of enactment.

The Ribicoff Bill also would set up a 19-member National Advisory Commission on Health Planning to aid in establishment of the department and to undertake a two-year study leading to recommendations for a 10-year national health policy.

\* \* \*

The American Medical Association supports legislation that would amend the Medicare law to expand the circumstances under which payment could be made for services rendered by physicians' assistants.

Payment now is permitted only when the assistant performs the services in the physician's presence. Under an amendment offered in the Senate to H.R. 1, such payment would be allowed where the assistant performs the services without the physician being present. However, an assistant would not be allowed to practice medicine autonomously or without supervision of his physician employer.

H.R. 1 provides for revisions of Social Security, including Medicare and Medicaid.

In a letter to Sen. Gaylord Nelson (D-Wis.), sponsor of the physician's assistant amendment, Dr. Ernest B. Howard, AMA executive vice president, said:

"We believe the amendment to be salutary. As you know, the AMA is fostering the development of appropriate programs to increase the number of physicians' assistants. It is anticipated

that such assistants will serve in various ways, and their role can be a valuable one in helping to meet our health manpower needs. In rural settings, for instance, the assistants may serve in communities or areas removed from the physician's office. The Medex program is one example of the assistant serving to extend the physician's services into adjoining areas. While delineation of the appropriate role of the physician's assistant, as well as appropriate criteria for certification, are now under formulation, and many programs are in the development stage, we believe your amendment will provide stimulus to the expanding acceptance of these programs."

\* \* \*

The American Medical Association urged that the Lead-Based Paint Poisoning Prevention Act be continued and expanded.

"A substantial percentage of lead poisoning can be traced to the ingestion of chips of lead-based paint by infants," an AMA statement said. "We believe that every reasonable means must be used to reduce this tragic affliction."

The AMA position was outlined in a letter from Dr. Ernest B. Howard, AMA executive vice president, to Sen. Edward M. Kennedy (D-Mass.) chairman of the Senate Health Subcommittee

which was considering the extension legislation (S. 3080).

"S. 3080 also adds a new subsection which authorizes the Secretary of Health, Education and Welfare to make grants to state agencies for the purpose of establishing centralized laboratory facilities for analyzing biological and environmental lead specimens obtained from local lead-based paint poisoning detection programs," Dr. Howard said.

"This is a proper and important expansion of the program and will provide needed financial support and encouragement to local programs. We would urge that this provision be supported by the committee.

"Other provisions of this legislation are concerned with a revision of the definition of lead-based paints and with increasing the funds authorized to carry on the programs of the Lead-Based Paint Poisoning Prevention Act. The lead content of paint should be kept at the lowest level possible, and we believe that the proposed revision in the definition will materially strengthen the desired objectives of reducing the incidence of this disease. The increased authorizations should also be beneficial in aiding the program to reach a higher degree of effectiveness."

## **IMPORTANT MEMORANDUM**

**From The Pulaski County Medical Society**

### **Controlled Substances Act Violations**

It has been called to the attention of this office by a drug inspector that a number of physicians in the Pulaski County area are in violation of the Controlled Substances Act.

Primarily, the violations have to do with prescribing on the telephone for persons who identify themselves as patients, or patients of a physician-partner. Often, the persons who request these prescriptions are not patients but are addicts who are extremely adept at gaining the sympathy of physicians who many times honor these requests.

In one particular case, a person who has obtained drugs in this manner will be prosecuted for obtaining drugs fraudulently. This person has named several physicians from whom these drugs were obtained by phoned prescriptions and who had never seen the patient.

Another apparent common violation of the Act

is the practice of physicians' employees (nurses, aides, etc.) calling in prescriptions without having direct instructions from the physicians to do so.

It is the sincere wish of the professional state boards involved that it will not be necessary to attempt to prosecute physicians or pharmacists for such violations, but it is apparently a matter of deep concern to the boards that these violations are becoming extremely wide spread.

The following two suggestions have been made:

1. Never approve a request by telephone for a prescription for any controlled substance unless you are certain that the caller is your patient and that the drug prescribed is of benefit to the illness of the patient.
2. Do not allow your nurse or aide to call in prescriptions unless directed on the specific occasion by you to do so.

### THE MONTH IN WASHINGTON

House-Senate differences and time pressures may well stall congressional action this year on the three major health measures before the lawmakers . . . national health insurance, health maintenance organizations (HMO's), and the Social Security Amendments to medicare and medicaid.

The death knell for national health insurance in this Congress may have been rung by House Ways and Means Committee chairman Wilbur Mills (D-Ark.) who now says he doubts if he will hold even executive sessions on the controversial measure.

The medicare-medicaid amendments (H.R. 1) which contain the professional standards review organization plan (PSRO), medicare for the disabled, and other amendments to the Social Security law, seem to face a rocky, uphill road in the Senate. One of the many controversial measures in the bill is Senator Long's (D-La.) catastrophic protection measure. To date Chairman Long has failed to sell the catastrophic proposal to a majority of his fellow members of the Senate Finance Committee. To make Long's road even tougher to travel are grumblings from Mills over in the House that he won't buy the catastrophic proposal, nor PSRO as presently written. But Long is a wiley maneuverer and the chances that the Senate can come up with a version of H.R. 1 satisfactory to the House are still not completely dead.

Not yet quite counted out this year are the HMO proposals in both the Senate and House. Senator Edward Kennedy (D-Mass.) insists he's going to push hard and swiftly for his sweeping HMO plan, but Administration and House health lawmakers view Kennedy's plan as too expensive, too rigid. Settling these differences and working out a satisfactory compromise in limited time remaining for Congress might be tough.

The Administration says the Kennedy HMO bill could cost individuals \$600 a year, a family of four, \$2,400. The Kennedy plan was also criticized for the scope of benefits proposed and for too rigid requirements on what makes up an HMO by HEW Secretary Elliot Richardson.

Testifying before Kennedy's health subcommittee, Richardson compared the individual cost of \$240 a year estimated in the Administration bill with the \$600 estimate for Kennedy's plan.

The senator challenged the figure, suggesting that it would be closer to \$400.

Richardson said "tight restrictions" in the senator's measure "would exclude individual practice HMO's, or medical foundation plans in urban areas from federal support and this would create a severe disincentive to their formation."

The HEW Secretary also took issue with Kennedy's plan for an HMO trust fund to cover the costs of premiums for people who can't afford them. Provisions for federal financing of health services should not be included in a health delivery systems bill but in a national health insurance proposal, Richardson said. "Moreover, the earmarking of particular federal tax receipts for specific purposes is inconsistent with the basic principles of good budget management."

Kennedy's bill would go beyond the Administration bill by requiring that HMO's provide mental health and dental care among other benefits.

"The approach in your bill is over-elaborate," Richardson said. "The more comprehensive the benefit package, the fewer the organizations will qualify," he said. "That is why the Administration bill has taken a quite general benefit approach."

\* \* \*

The American Medical Association has urged Congress to observe a "flashing yellow light of caution" before rushing into large-scale HMO programs.

Testifying before the House Subcommittee on Health and Environment were John R. Kernodle, M.D., Burlington, N.C., vice chairman of the AMA Board of Trustees, and Russell B. Roth, M.D., Erie, Pa., speaker of the Association's House of Delegates.

Dr. Kernodle said that "considerable funds have already been allocated for HMO's. We urgently need to evaluate these initial efforts."

The North Carolina group practitioner told the subcommittee that the AMA favors a pluralistic system of medical care.

"We believe different methods of medical care should be allowed to compete freely in the marketplace to satisfy varying public demands," he said.

"We strongly believe that no one method of medical care can satisfy all. No one method of care should be imposed and no one method should be so heavily subsidized or otherwise en-

couraged as to undermine the working of free choice.

"Believing in a pluralistic approach we feel that HMO's merit trial. But the basis should be limited, experimental. The possible benefits to health in terms of service rendered and their possible efficiencies in terms of cost reduction should then be objectively measured against the possible shortcomings and deficiencies."

Dr. Kernodle noted that the Administration has made 110 planning and development grants, and is requesting \$27 million in a supplemental budget for this year and \$60 million next year to speed these programs.

"Conceivably," he said, "the HMO could solve some of our problems. But that is not yet proven.

"HMO's could represent a giant step backwards to a type of contract medicine the public rejected half a century ago."

Dr. Kernodle said that even in recent years contract medicine has had a "sobering record of failure—the passing of the Rip Van Winkle group in Hudson, N. Y., declining enrollments in the Community Health Association of Detroit and the Inter-County Hospital Plan of Johnston, Pa.,—all these signals flash a bright yellow caution light."

The AMA official questioned "the ability of the HMO to fulfill the public hope for the kind of medical care they want at a low cost."

"We question too that the type of practice offered in an HMO will attract a substantial segment of the medical profession," he added.

"I hope I have suggested that there is much reason to proceed with caution. We should first gain experience with test models and see if they fly before we order a whole fleet."

"Considerable funds have already been allocated for HMO's. What is urgently needed now is a sound, objective mechanism with which to evaluate the initial efforts."

In his testimony, Dr. Roth also urged the sub-committee members to be cautious in expanding HMO programs. He said:

"The federal government has already made some 110 grants for planning and for feasibility studies for HMO's. But the results of these studies and plans are as yet unknown in terms of the quality and extent of the services which can be provided, their accessibility to beneficiaries, the cost of providing them, and their acceptability to consumers and providers alike."

"We believe that the present range of federally funded experimentation is quite adequate to provide most of the desired answers in a few years. On the other hand, we believe that the announced goal of having HMO's available to 80 per cent of the population within a decade is indefensible overpromise."

Dr. Roth concluded, "We further propose a moratorium on the funding of additional planning for, or subsidy of, HMO operation until existing experimental programs can be evaluated in terms of quality of service, efficiency, availability, and economy."

\* \* \*

Mobile x-ray equipment should not be used for general-population surveys for tuberculosis and other chest diseases, says a statement by the American College of Chest Physicians, American College of Radiology, and the Food and Drug Administration.

The equipment used in many parts of the country "is not productive as a screening procedure for chest disease detection," the statement says.

The joint statement supercedes a 1958 policy declaration by the U. S. Surgeon General that said mass chest x-rays should be conducted "selectively" with groups "at high risk of tuberculosis infection."

The new policy was indicated "in large part by the fact that tuberculosis is now almost nonexistent in many regions of the country," said Merlin K. DuVal, M.D., HEW Undersecretary for Health and Scientific Affairs. "The use of mobile equipment, which requires relatively higher levels of x-ray exposure than fixed equipment, simply cannot be justified." Records of the number of mobile x-ray units still being used are not available. Twenty-eight states had registered one or more x-ray vans for use in 1970, but several of these have since discontinued use of the equipment. The 1970 information will be updated after July 1, this year, the FDA's Bureau of Radiological Health said.

The new policy recommends full size x-ray film when x-ray screening of selected population groups is essential. The recommendation is intended to discourage the use of photofluorographic equipment that uses a fluoroscope screen in combination with miniature photographic film.

\* \* \*

In hopes of retaining and attracting sufficient numbers of physicians in the armed forces without resorting to a continuation of the physician draft, the Administration offered Congress a special pay program under which military physicians could earn above \$40,000 a year.

Under the plan, the military services are authorized to give physicians as much as \$17,000 a year in extra pay. This would be on top of \$350 a month above the base pay for their rank after two years of service.

The bill also continues the special pay provision now in effect, but that would expire when the draft ends, of \$100 a month additional for the first two years of service. At present, the \$100 a month is increased to \$350 a month in steps after two years of service. However, the bill speeds the process up by inaugurating the \$350 monthly special pay immediately after two years. The \$17,000 continuation pay is a maximum and most physicians would not receive this much. Thus after two years, a military physician could earn at most the salary of his rank, plus \$350 a month, plus \$17,000 a year.

The bill also provides that public health service commissioned corps officers could receive up to four months additional pay per year over their military rank salary for signing up.

\* \* \*

Federal researchers reported that findings from recent national surveys challenge the view that the prescribing habits of American physicians may contribute to the rising incidence of drug abuse.

Drs. Mithcell Balter, Ph.D., and Jerome Levine, M.D. of the National Institutes of Mental Health say:

"Our data indicate that most private practitioners, if anything, err in the conservative direction," in prescribing psychotherapeutic drugs. They see little likelihood that doctors contribute to drug abuse by creating physical dependence among their patients.

Less than half of those surveyed who showed "high levels of psychic distress" had used any psychotherapeutic medication obtained on prescriptions during the past year.

In the study, 43 per cent of the males and 54 per cent of the females who had used prescription psychotherapeutic drugs during the past year had

a high level of psychic distress, indicating treatment had been necessary.

Other general findings include:

- \* No evidence for claims that Americans are chronic users of psychotherapeutic drugs.

- \* Americans are conservative in their attitudes toward using tranquilizers. Most agreed that doctors prescribe such drugs more than they should, and held it is better to use willpower to solve problems, which tranquilizers may cover up.

- \* Despite national differences, the rate of prescriptions filled in the U.S. is similar to rates found in several European countries. That is slightly more than five prescriptions per person per year.

The conclusions were drawn from NIMH sponsored studies designed to gather data on prescriptions filled in U.S. drugstores, on the prescribing behavior of private physicians, and on pattern of drug acquisition and usage among adults.

### Society Awards for 4-H Clubs

The Committee on Rural Health of the Arkansas Medical Society is sponsoring "Health Activity" awards to winners in district contests of the 4-H Clubs of Arkansas. The contests are designed to provide 4-H boys and girls an opportunity to demonstrate their interest in, knowledge of, and achievements in personal, family, or community health. Each county names a junior (9-13 years) and a senior (14-19) winner to enter district competition. The participants present an illustrated talk or a demonstration on some area of personal, family or community health. A first place winner for the district in both the junior and senior category will receive a trophy from the Society. District winners are eligible to compete in the Arkansas 4-H O'Rama. Officers of the Society have presented trophies on behalf of the Society as follows:

Waldron: Dr. John P. Wood, President-elect.

Russellville: Dr. Charles F. Wilkins, Jr., Vice Speaker.

Batesville: Dr. Paul Gray, Councilor.

Magnolia: Dr. J. B. Jameson, Jr., Councilor.

Fayetteville: Dr. Morris M. Henry, Councilor.

### Sudden Infant Death Syndrome

After losing a two-month-old daughter to Sudden Infant Death Syndrome (SIDS), Mrs. Sandra

Smead of Decatur, Arkansas, became interested in the National Foundation For Sudden Infant Death, and has recently started working as an Area Contact for the Foundation. She is the only person working with the Foundation in Arkansas; and is believed to be the closest contact for Oklahoma and Missouri. Mrs. Smead's responsibility is to provide information about SIDS, particularly to parents who have lost a

child, and to be available to parents if they wish to talk with someone, other than a physician, who understands their problems at that time.

Physicians who know of SIDS parents who might need the help such as Mrs. Smead could give them should have them contact Mrs. Sandra Smead, Decatur, Arkansas 72722, telephone 752-3723, during the evening or 787-5291, extension 31, during the day.



## PERSONAL AND NEWS ITEMS

### **Physician Installed as Fellow**

Dr. Jack W. Harrison of Texarkana was installed as a Fellow of the American College of Obstetricians and Gynecologists at the College's 20th annual meeting in Chicago in May.

### **Dr. Dennis Honored**

A life-size portrait of Dr. James L. Dennis was presented to the University of Oklahoma School of Medicine by the University of Oklahoma School of Medicine's Alumni Association at an unveiling ceremony May 11th at the University of Oklahoma Medical Center Library. Dr. Dennis was dean of the Oklahoma Medical School for six years prior to coming to the University of Arkansas School of Medicine as Vice President for Health Sciences in 1970.

### **Physician Elected**

Dr. James H. Growdon of Little Rock was installed as president of the Southwestern Surgical Congress at the organization's annual meeting in Albuquerque, New Mexico.

### **Physician Joins Staff of Clinic**

The Little Rock Diagnostic Clinic has announced the association of Dr. Raymond L. Marecek in endocrinology and metabolic diseases.

### **Doctor's Offices Burglarized**

The office of Dr. John M. Farmer of Magnolia was ransacked in early May. A small amount of controlled drugs was taken, along with various other medication.

The offices of Dr. L. Gordon Holt, Jr., and Dr. Mose Smith, III, at 5326 West Markham, Little Rock, were also burglarized in May, as well as the offices of Dr. O. E. Cutler and the Little Rock Surgical Clinic, both located at 5512 West Markham in Little Rock.

### **Computer System Installed in Hospital**

The computer system known as "Medline" has been installed in the Regional Health Sciences Library, located at Sparks Regional Medical Center in Fort Smith. The system, which will assist local and area physicians in locating medical information, is the first and only one of its kind in the Nation that is in use in a community general hospital. Access to the system is gained through use of a teletypewriter which is connected to the computer system located at the National Library of Medicine in Bethesda, Maryland.

### **Health Education Center Planned**

Dr. C. W. Silverblatt, co-ordinator of the Arkansas Regional Medical Program; Dr. Jacob Ellis, South Arkansas Director of the Regional Medical Program; Dr. Paul G. Henley, president of the Union County Medical Society; Dr. Kenneth R. Duzan, a pathologist in El Dorado; and other interested officials, attended a conference to discuss a proposal for a health education center for South Arkansas to be established in El Dorado.

**Physicians Re-elected**

Dr. Raymond C. Read, chief of surgery at the Veterans Administration Hospital in Little Rock, has been re-elected president of the Little Rock Academy of Surgery and Dr. G. Doyne Williams, assistant professor of surgery at the University of Arkansas School of Medicine, has been renamed secretary-treasurer.

**Dr. Wallick Purchases Lot**

Dr. Paul A. Wallick of Little Rock, formerly of Monticello, recently purchased a lot in the Health, Education and Cultural Complex at Monticello. The lot is located in the area in which the new Drew County Hospital is being constructed.

**Physicians Inducted Into Fraternity**

Alpha Omega Alpha, honorary medical fraternity at the University of Arkansas Medical School, inducted seventeen persons into membership at a ceremony on May 26th at the Sam Peck Hotel in Little Rock. Among those inducted into membership were Dr. Roger Bost, Dr. Ruth C. Steinkamp, and Dr. John Lane, all of Little Rock. Dr. Winston K. Shorey, dean of the medical school, discussed the future of the school preceding the induction ceremony.

**Dr. Alford Speaks**

Former Congressman Dr. T. Dale Alford of Little Rock spoke at the Association of American Physicians and Surgeons Private Doctors Institute held April 20-22 in Chicago. A member of the AAPS, Dr. Alford spoke on the ways and means by which physicians can shape public policy and opinion.

**Dr. Bailey Guest Speaker**

Dr. H. A. Ted Bailey, Jr., of Little Rock, was one of two guest speakers for the ENT Section of the Virginia EENT Society at its meeting May 9th through May 11th at Williamsburg, Virginia. Dr. Bailey presented two formal papers (one on the use of Electronystagmography in the Study of Vertigo and the other on Management of Ear Drum Perforations) and conducted a one-hour question and answer session on various problems concerning the ear.

Dr. Bailey was recently taken into the Barany Society (an International Society founded for research and clinical study of vestibular diseases of the ear. The Barany Society will hold its 1972 meeting in Salzburg, Austria, in September.



**Dr. John B. Jameson, Jr.  
Camden  
Councilor, Fifth District**

Dr. John B. Jameson, Jr., of Camden was elected to the position of councilor for the fifth district at the annual meeting in Hot Springs in April. He succeeded Dr. George F. Wynne of Warren in the position.

Dr. Jameson served as a staff sergeant in the United States Army from 1944 to 1946. He received his B.S. degree from Tulane University in 1949, and his M.D. degree from Tulane University School of Medicine in 1952. He received his internship and residency training at the Confederate Memorial Medical Center, Shreveport, Louisiana. Since 1956, Dr. Jameson has been in the practice of general surgery in Camden.

He has been chief of staff of the Ouachita Hospital, and is presently serving on the Executive Committee of the hospital. He serves as team physician for the Camden High School and, for nine years, he served as secretary of the Camden School Board. Dr. Jameson holds membership in the American Board of Surgery, the American College of Surgeons and the Southwestern Surgical Congress.

Dr. Jameson is interested in aviation. He is a pilot, a member of "Flying Physicians," and serves as an Aviation Medical Examiner.



## NEW MEMBERS

### **Dr. Anne C. Utley**

Dr. Anne C. Utley has been accepted for membership in the Craighead-Poinsett County Medical Society. Dr. Utley was born in Tigrett, Tennessee. She received her pre-medical education at Memphis State College in Memphis, Tennessee, and in 1964, she was graduated from the University of Tennessee College of Medicine. Dr. Utley completed her internship at Georgia Baptist Hospital in Atlanta, Georgia. From August 1966 to December 1969, she served as Tuberculosis Control Officer for the State of Tennessee. Dr. Utley is a general practitioner. Her office is located in the Infirmary at Arkansas State University, State University, Arkansas.

### **Dr. Robert Ronald Sykes**

Dr. Robert R. Sykes is a new member of Howard-Pike County Medical Society. He is a native of Hot Springs. Dr. Sykes received his B.S. degree from Ouachita Baptist College in Arkadelphia in 1966. In 1971 he was graduated from the University of Arkansas School of Medicine. Dr. Sykes' internship was completed at William Beaumont General Hospital, El Paso, Texas, where he presently serves as Director of Intern Training. He is a captain in the Medical Corps of the United States Army. Dr. Sykes is a family practitioner.

### **Dr. Charles Harold Harger**

Dr. C. Harold Harger is a new member of the Pulaski County Medical Society. Born in Bald Knob, Dr. Harger attended high school in Fort Smith, received a B.A. degree from Hendrix College in Conway, and was graduated from the University of Arkansas School of Medicine in 1963. He received his internship training at Arkansas Baptist Hospital. His residency work in Anesthesiology was done at the University of Arkansas Medical Center and the Veterans Ad-

ministration Hospital in Little Rock. His office for the practice of Anesthesiology is located in the Medical Arts Building in Little Rock.

### **Dr. Bobby Richard Johnson**

Dr. B. Richard Johnson has been accepted for membership in the Pulaski County Medical Society. He is a native of Prescott. Dr. Johnson attended Southern State College in Magnolia, and in 1961, was graduated from the University of Arkansas School of Medicine. His internship was completed at Arkansas Baptist Medical Center, as well as a three-year residency in Anatomic Pathology. Dr. Johnson specializes in Pathology. His office is at the Baptist Medical Center, 1700 West 13th, in Little Rock.

### **Dr. Gerald Synder Laros, II**

Dr. Gerald S. Laros, II, is a new member of the Pulaski County Medical Society. He was born in Los Angeles, California. Dr. Laros received his pre-medical education at Stanford University, Palo Alto, California. He received his M.D. degree from Northwestern University Medical School, Chicago, Illinois, in 1955. He completed his internship at the Philadelphia General Hospital in Philadelphia, Pennsylvania. His residency work in Orthopaedics was done at the Veterans Administration Hospital and affiliated institutions in Hines, Illinois. In 1970, he completed a Fellowship at the University of Iowa College of Medicine, Iowa City, Iowa. Dr. Laros specializes in Orthopaedics at the Veterans Administration Hospital in Little Rock. He is a member of the American Academy of Orthopaedic Surgeons.

### **Dr. Joe Elliott Smith**

Dr. Joe E. Smith is a new member of the Pulaski County Medical Society and a native of Little Rock. In 1959, he received his B.S. degree from Philander Smith College in Little Rock, and in 1963, he was graduated from the University of Arkansas School of Medicine. His internship was completed at Hurley Hospital, Flint, Michigan, and a three-year residency in Ophthalmology was completed at the Veterans Administration Hospital in Tuskegee, Alabama. Dr. Smith held a teaching appointment at the VA Hospital in Tuskegee, from 1969 to 1971. His office for the practice of Ophthalmology is located at 7107 West 12th Street in Little Rock.

## NEW MEMBERS

### **Dr. John K. Day**

Dr. John K. Day has been added to the membership roll of Washington County Medical Society. Dr. Day was born in Summerville, Missouri. He graduated from the University of Missouri, Columbia, Missouri, in 1957, and in 1961, he was graduated from the University of Missouri College of Medicine. He served his internship at Kansas City General Hospital, Kansas City, Missouri. After completing a General Practice residency at the Sacramento County Hospital in 1964, he was in private practice in Bowling Green, Missouri, for four years. From 1968 to 1971, he was Director of Student Health at the University of Missouri; he also served as an assistant professor at the University for three years, and as a Clinical Instructor for four years. Dr. Day is Director of Student Health at the University of Arkansas at Fayetteville. He is Board Certified in Family Practice and a member of the American Academy of Family Physicians.

### **Dr. Hamilton Robert Hart**

Dr. Hamilton R. Hart has been accepted for membership in the Washington County Medical Society. A native of Seattle, Washington, he attended the University of Arkansas at Fayetteville and the University of Arkansas School of Medicine, graduating in 1963 and 1967, respectively. He interned at Hillcrest Medical Center, Tulsa, Oklahoma, and also did his residency work in General Practice there. Dr. Hart served for two years in the United States Navy. His office for the General Practice of medicine is in the Colonial Village in Fayetteville.

### **Dr. J. Campbell Gilliland**

Sebastian County Medical Society has added Dr. J. Campbell Gilliland, a native of Jackson, Mississippi, to its membership roll. Dr. Gilliland was graduated from Millsaps College, Jackson, Mississippi, in 1954, and in 1957, he was graduated from the University of Mississippi School of Medicine. He completed his internship at the University of Mississippi Medical Center and his residency work in Pediatrics was at the Uni-

versity Medical Center in Jackson and the Grace-New Haven Hospital in Connecticut. Dr. Gilliland was in practice for two years in Jackson, Mississippi, before serving in the United States Army. Following his release from the Army, he completed a two year Fellowship in Pediatric Cardiology at the Texas Children's Hospital in Houston. Dr. Gilliland was in practice at Oschner Clinic from 1968 to 1971. He has served as a Clinical Instructor at the University of Mississippi School of Medicine and as a Clinical Assistant Professor of Pediatrics at Louisiana State University School of Medicine.

Dr. Gilliland is Board Certified in Pediatrics. He is associated with Drs. Charles Floyd, Joel E. Parker, and James Post at 617 South 16th Street, Fort Smith, where he specializes in Pediatrics, Pediatric Cardiology and Cardiac Catheterization.

### **Dr. Jack Lindsey Magness, Jr.**

Dr. Jack L. Magness, Jr., is a new member of the Sebastian County Medical Society. He was born in Newark, Arkansas. Dr. Magness attended Hendrix College, receiving his B.A. degree in 1961. He was graduated from the University of Arkansas School of Medicine in 1965, and interned at St. Vincent Infirmary, both in Little Rock. Dr. Magness returned to the University Medical for his residency training in Pediatrics. After serving two years in the United States Air Force, he began his practice in Fort Smith, at 312 South 16th Street. Dr. Magness is a Fellow in the American Academy of Pediatrics.

### **Dr. Jabez Jackson, Jr.**

A new member of the Jackson County Medical Society is Dr. Jabez Jackson, Jr., who is a native of Jonesboro. Dr. Jackson received his pre-medical education at Vanderbilt University, Nashville, Tennessee, from which he was graduated in 1963, and the University of Arkansas. In 1968, he was graduated from the University of Arkansas School of Medicine. His internship was completed at the City of Memphis Hospitals, where he is presently receiving his residency training in Obstetrics and Gynecology.





## OBITUARY

### **Dr. Roscoe C. Lewis, Sr.**

Dr. Roscoe C. Lewis, Sr., died May 26, 1972, at his home in Camden. He was born December 21, 1901, in Jefferson, Texas.

Dr. Lewis was graduated from Meharry Medical College School of Medicine, Nashville, Tennessee, in 1931. He began his practice of medicine in Hope, Arkansas, in 1932, where he remained until 1952. In that year, Dr. Lewis moved to Camden, where he lived and practiced until the time of his death.

Dr. Lewis was a member of the Ouachita County Medical Society, the Arkansas Medical Society and the American Medical Association. He was a member of St. James AME Church, and was active in civic organizations.

He is survived by his wife, Mrs. Era Robinson Lewis, one son and one brother.

\* \* \*

### **Dr. Oscar J. T. Johnston**

Dr. O. J. T. Johnston of Batesville died June 4, 1972, at the age of 88. He had practiced in Batesville for more than sixty-two years.

Born in Eclectic, Alabama, Dr. Johnston moved to Arkansas in 1885. He attended the University of Arkansas School of Medicine for two years, and completed his medical education at the University of Nashville Medical Department, graduating in 1907. He did postgraduate work at Tulane University and the Mayo Clinic. During World War I, Dr. Johnston was commissioned a captain in the Medical Corps and served overseas for eight months.

Dr. Johnston served as secretary of the Second

Councilor District Medical Society, and in 1937, he was installed as president of the Arkansas Medical Society.

He was a member of the American Medical Association, a Life Member of the Arkansas Medical Society, a member of the Independence County Medical Society, and a member of the Southern Medical Association.

Dr. Johnston was a member of the First United Methodist Church and many civic clubs. He was a member of the Mt. Zion Masonic Lodge No. 10 for over fifty years. For many years he served as physician to the Masonic Orphans' Home at Batesville.

Dr. Johnston is survived by two daughters, one sister, two grandchildren, and three great-grandchildren.

\* \* \*

### **Dr. Garland D. Murphy, Sr.**

Dr. Garland D. Murphy, Sr., died June 6, 1972. He was born October 17, 1881, in Oakland, Louisiana.

Dr. Murphy was graduated from Tulane University School of Medicine in 1912. He practiced in Meridian, Mississippi, before beginning his practice in El Dorado in 1919.

Dr. Murphy was a Life Member of the Arkansas Medical Society, a member of the Union County Medical Society, and a charter member of the Arkansas Chapter of the American Academy of Pediatrics.

He was a member of the First Baptist Church, where he served as a deacon; a member of the El Dorado Rotary Club; and a former member of the El Dorado School Board and the City Council.

Dr. Murphy is survived by his wife, Mrs. Fanelle Moore Murphy; one son, Dr. John T. Murphy of Ohio; two sisters; fourteen grandchildren; and four great-grandchildren.



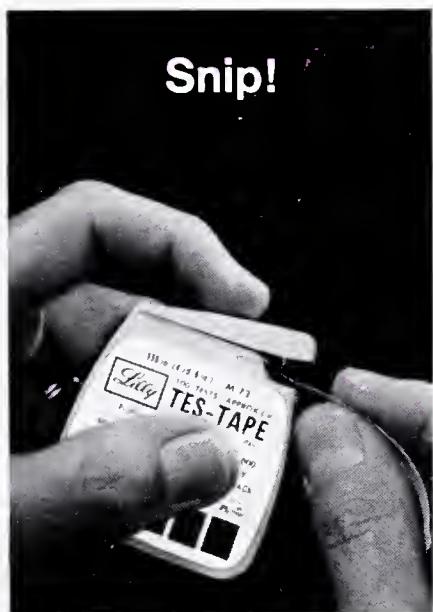
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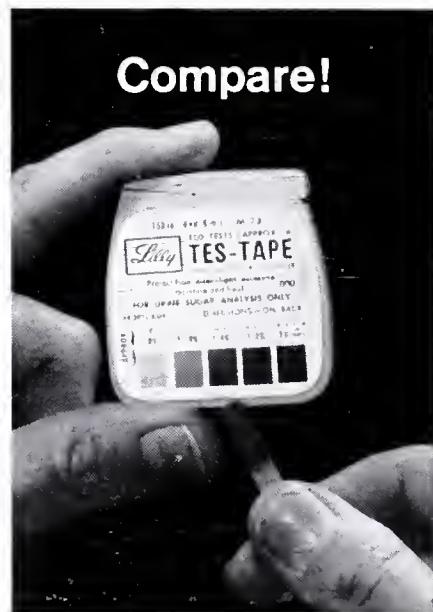
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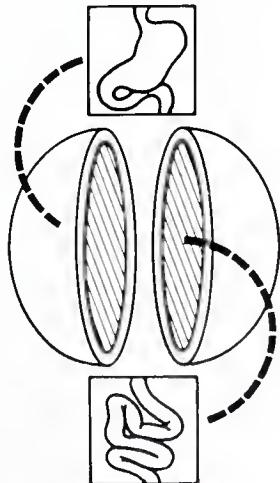
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**References:** **1.** Roth, J. L., *Ann N.Y. Acad. Sci.*, 150:109, Feb. 26, 1968. **2.** Reich, N. E., and Fremont, R. E. (eds.) *Chest Pain*, The Macmillan Company, New York, 1961, p. 348.



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## Intramural Esophageal Diverticulosis A Case Report

John W. Lane, M.D.\*

Intramural esophageal diverticulosis was first described by Mendl et al in 1960 (1). At that time no prior case reports could be found in the literature but since then six more have appeared (2,3,4,6,7,8). One of these (4) was subsequently proven to be moniliasis of the esophagus (5). A second case (6) showed *Candida albicans* in the esophagus wall in biopsy material and is probably moniliasis of the esophagus rather than intramural diverticulosis. This leaves a total of five cases reported in the literature up to this time. This paper is a report of what I believe to be another example of this, apparently, relatively rare entity; increasing the total cases to six. In addition to those which have been reported, Hodes (2) states that Schatzki showed him radiographs of a patient which he felt was intramural diverticulosis and Greely (7) states that three more cases will soon be reported by Beauchamp and Nice, but as of this writing they have not appeared in the literature.

Intramural esophageal diverticulosis is a relatively rare entity in which multiple, small diverticula are seen involving a major portion, if not all, of the length of the esophagus. The necks of the diverticula are usually very small (1 mm. or less) but they nearly always terminate as bulbous or flask shaped structures which measure 2-3 mm. or more in width. The diverticula appear to remain confined to within the wall of the esophagus, and therefore are quite different from all the previously known esophageal diverticula which protrude well beyond the confines of the esophageal wall (1). These patients complain of dysphagia of one form or another and the diverticula are found in the course of investigating this complaint. Outside of this there have

been reported few or no constant symptoms or physical findings.

### CASE REPORT

The patient is an 83 year old, black, female who was a known diabetic of many years duration and who has been seen in the emergency room in diabetic coma. On this admission, her chief complaint was dysphagia, glossitis, and cheilitis. She also complained of chronic arthritis of some years duration, and an irritating vaginal discharge.

Because of the dysphagia, a barium swallow and upper GI series were obtained and the esophagus was found to be virtually covered with tiny, globular shaped, diverticula. (Figure 1) No esophageal irritability or spasm was noted by the fluoroscopist, but a constant contraction of the esophagus near its cardiac end was observed. (Figure 1) The appearance of the diverticula was almost identical to those cases of intramural diverticulosis which have been described in the literature. They were tiny, discrete and did not have the ragged undermined appearance one associates with moniliasis (9, 10). Although the vaginitis was thought to be monilial in origin (and improved with anti-fungal therapy) it was never proved as such. The patient's diabetes was brought under control and she was discharged from the hospital. Unfortunately no further studies of the esophagus were obtained and as of this date we have been unable to gain any further information.

### Discussion

The etiologic basis for intramural esophageal diverticulosis has not been well defined. Mendl (1) postulated that esophageal spasm and consequent increased intraluminal pressure associated with superimposed infection might lead to the production of the diverticula. He drew a close

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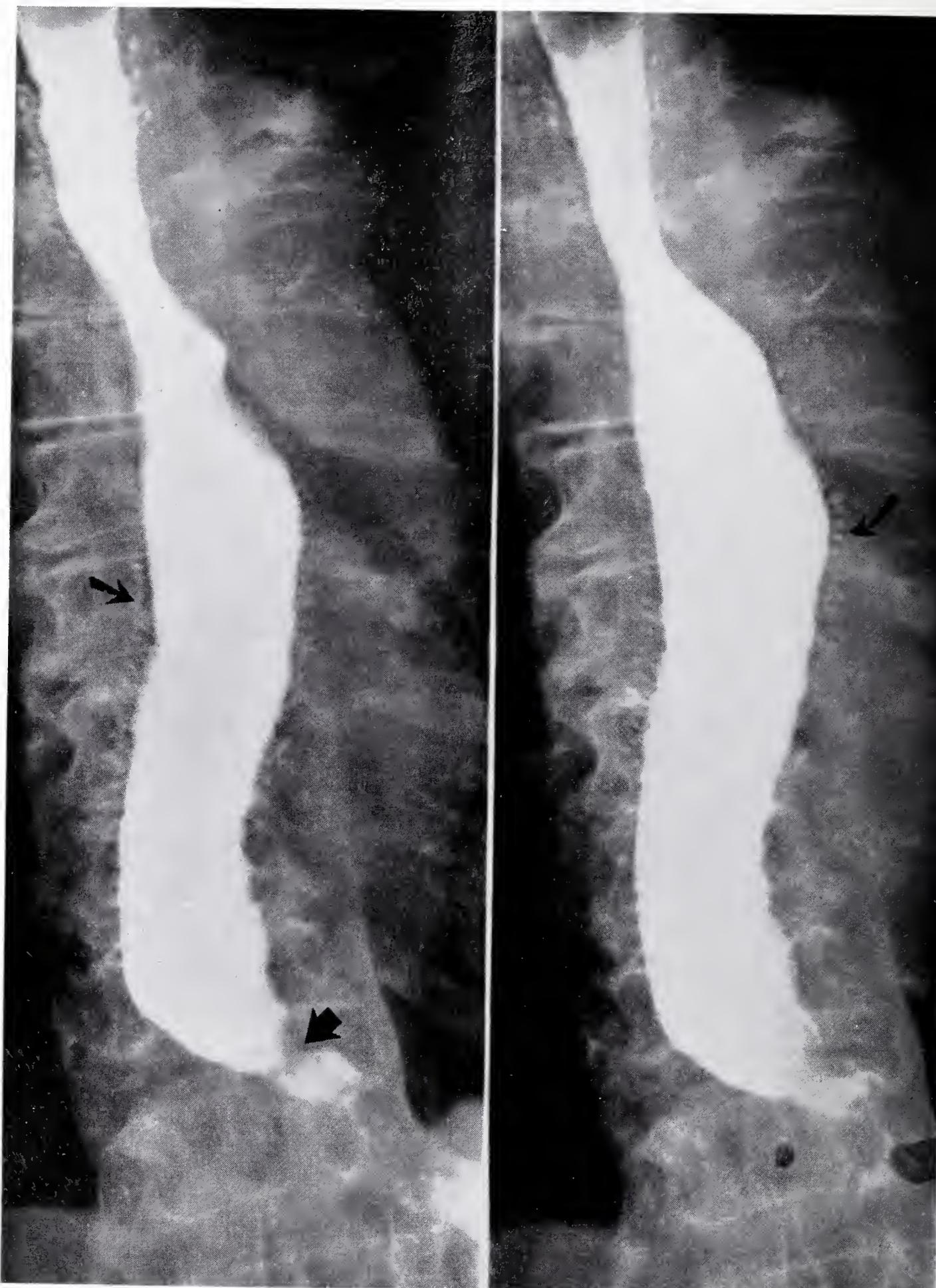


Figure 1.

The entire length of the esophagus is involved with tiny diverticula. Note the narrow necks (1 mm.) but bulbous termination of the protrusions. A constant narrowing (large arrow) near the cardiac end was demonstrated.

parallel with the Rokitansky-Aschoff sinuses one observes in gall bladder disease. Hodes (2), Culver (3), and others have also noted this similarity. The radiographic appearance of the diverticula is indeed very similar to that of the Rokitansky-Aschoff sinuses, and the postulated mechanism for their development in the gall bladder is very similar to the one suggested by Mendl (1) for intramural diverticulosis of the esophagus. Four of the six cases of intramural diverticulosis have had stenotic lesions. The other two, while no obstructing lesions were seen, demonstrated marked spasm, irritability, and contraction of all or a large segment of the esophagus. While the series is too small to be statistically significant, one is certainly drawn to a correlation between increased intraesophageal pressure and the formation of the diverticula. Alternately, it is common to see examples of obstructing lesions of the esophagus and patients with increased esophageal contractions and spasm who do not have the association of intramural diverticula. It would appear therefore, that while increased intraesophageal pressure might be a necessary factor it is not always a causative factor in the production of the diverticula.

Numerous examples of fungal infection involving the esophagus have been reported in the literature and Hodes (2) suggests the possibility of monilial infection as an etiologic factor in intramural diverticulosis. However, there seems to me to be a definite difference in the radiographic appearance of esophageal moniliasis and that of intramural diverticulosis. The ulcers are larger and appear deeper in moniliasis and there is intercommunication of the ulcer's bases. The ragged, coarse appearance (9, 10) seen in moniliasis is in contradistinction to the rather fine, discrete appearance seen in intramural diverticulosis. In only two of the reported cases was monilia cultured from the esophagus and/or mouth; however, this would not preclude the possibility that the diverticula were formed during a previous monilial infection. None of the cases of diverticulosis presented a history of chronic, debilitating disease or a chronic infection as is commonly seen in moniliasis (9). One patient (3) was only 21 years old and presented a history of dysphagia since birth and to postulate moniliasis as causative in this patient seems rather over drawn. Troupin (6) reported a case with numerous outpouchings of the esophagus which

upon biopsy showed monilial invasion of the esophageal wall but the findings are (to my eye) coarser and are the changes of esophageal moniliasis rather than diverticulosis. Unless one feels, as did Troupin, that intramural diverticulosis is associated with monilial infection this case should not be considered as an example of esophageal intramural diverticulosis.

Every patient reported so far has had a symptom of dysphagia although of varying duration, severity, and type. Some (2, 3) were followed up to three years and with treatment showed no change in the appearance of the esophagus. One (8), however, showed disappearance of the diverticula following esophageal dilatation. The case described by Zatzkin and subsequently shown by Schmulewicz to be moniliasis responded to anti-fungal therapy both clinically and radiographically.

The ages varied from 21 to 83. There were four males and two females. There does not appear to be a racial propensity. One patient developed the diverticula after gastrectomy which was followed by a hiatal hernia with gastric reflux and an esophageal stricture (8). This is the patient who demonstrated virtual disappearance of the diverticula following bougienage; seeming to establish, at least in this patient, a relationship between obstruction and the diverticula.

Four of the reported cases (4, 6, 7, 8) have had biopsy material for microscopic examination. Two of these are probably moniliasis (4, 6). All showed chronic and/or acute inflammation but none demonstrated the character of the diverticula. Two likely possibilities seem to exist. (1) As in the Rokitansky-Aschoff sinuses they may represent mucosal protrusions. In the esophagus they would be protrusions thru the muscularis (perhaps weakened by inflammation) into, but not through, the adventitial lining of the esophageal wall. Mendl (1), Creely (6), and Weeler (8) all felt this to be most likely. (2) The possibility exists that they represent dilated, inflamed acinar glands. Hodes (2) pointed out their similarity to the dilated bronchial glands one observed in chronic bronchitis. This certainly is a valid comparison but, as of this date, one must admit that the true character of the diverticula is not known.

From the foregoing it would seem that a combination of increased intraesophageal pressure associated with chronic inflammation (whether

## INTRAMURAL ESOPHAGEAL DIVERTICULOSIS — A CASE REPORT

it be monilial, bacterial, or chemical as in gastric reflux) are the necessary precursors of intramural esophageal diverticulosis. The exact histologic nature of the diverticula, however is not known. Why all patients presenting with this combination of clinical findings do not exhibit intramural diverticulosis is not clear. It certainly seems clear to us that the above combination of events is much too common in our clinical experiences to be the sole etiologic agents responsible for this relatively rare entity. Perhaps some underlying congenital propensity could be related which might be suggested by the 21 year old patient described by Culver (3). While we do not have a clear picture of intramural diverticulosis at this time, I expect that we will have, as new cases are observed and reported in the literature.

### SUMMARY

A case of Intramural Esophageal Diverticulosis is presented. This makes the sixth patient reported in the literature. The etiology and exact character of the disease is unknown. It is our opinion that it is a separate entity from esophageal moniliasis. The only constant symptom presented by these patients was that of dysphagia. There is a high incidence of stenotic lesions of the esophagus and/or increased esophageal irritability and contractions. There does not appear to be any age, sex, or racial propensity. A comparison

has been drawn with the Aschoff-Rokitansky sinuses of the gall bladder and the dilated bronchial glands of chronic bronchitis.

### REFERENCES

1. Mendl, Karl, McKay, J. M., Tanner, C. H.: Intramural Diverticulosis of the Oesophagus and Rokitansky-Aschoff Sinuses in the Gall-Bladder. *Brit. J. Radiol.*, XXXIII, No. 392, 496-501, Aug. 1960.
2. Hodes, P. J., Atkins, J. P., Hodes, B. L.: Esophageal Intramural Diverticulosis. *Am. J. Roentgenol.*, Vol. 96, (No. 2), 411-413, Feb. 1966.
3. Culver, G. J., Chaudhari, K. R.: Intramural Esophageal Diverticulosis. *Am. J. Roentgenol.*, Vol. 99, (No. 1), 210-211, Jan. 1967.
4. Zatzkin, H. R., Green, S., LaVine, J. J.: Esophageal Intramural Diverticulosis. *Radiology*, Vol. 90, (No. 6), 1193-1194, June 1968.
5. Smulewicz, J. J., Dorfman, J.: Esophageal Intramural Diverticulosis: A Re-evaluation. *Radiology*, Vol. 101, 527-529, Dec. 1971.
6. Troupin, R. H.: Intramural Esophageal Diverticulosis and Moniliasis. *Am. J. Roentgenol.*, Vol. 63, (No. 3), 613-616, Nov. 1968.
7. Creely, J. J., Trail, M. L.: Intramural Diverticulosis of the Esophagus. *Southern Medical J.*, Vol. 63, (No. 11), 1257-1260, Nov. 1970.
8. Weller, M. H., Lutzker, S. A.: Intramural Diverticulosis of the Esophagus Associated with Postoperative Hiatal Hernia, Alkaline Esophagitis, and Esophageal Stricture. *Radiology*, Vol. 97, 373-377, Feb. 1971.
9. Kaufman, S. A., Scheff, S., Levene, G.: Esophageal Diverticulosis. *Radiology*, Vol. 75, (No. 75), 726-732, Nov. 1960.
10. Marsh, A. P.: Esophageal Moniliasis. *Am. J. Roentgenol.*, Vol. 82, (No. 6), 1063-1066, Dec. 1959.



### Management of Acute Aortic Dissections

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*Ann Thorac Surg* 10:237-247 (Sept) 1970

A series of 35 patients with dissecting aortic aneurysm is reported. It is emphasized that a marked difference exists both therapeutically and prognostically between dissections involving the ascending aorta and those limited to the descending aorta. Patients with ascending aorta involvement had a 28% hospital mortality when treated surgically, as contrasted to a 67% mortality when treated medically. In patients with descending dissection, however, the two forms of treatment do not differ significantly in terms of mortality; the hospital mortality is 20% with medical treatment, and 28% with surgical treatment.

### Macroglobulinemia Treated With Prednisone, Azathioprine, and Folic Acid

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*Brit Med J* 3:750 (Sept 26) 1970

Severe anemia and neutropenia in a patient with macroglobulinemia were successfully treated with a combination of prednisone, azathioprine, and folic acid after other cytotoxic drugs had been unsuccessful. Accepted criteria for the diagnosis of macroglobulinemia were employed although some features of the case were atypical. Azathioprine and prednisone therapy should be tried in similar patients. The mode of action is uncertain, and folic acid, which was given in anticipation of hemopoietic response, was possibly not necessary.

# Our Experience With Cancer of the Head and Neck

James Y. Suen, M.D. and Robert N. McGrew, M.D.\*

A full time otolaryngology service has been in existence at the University Medical Center Hospital and the Little Rock Veterans Hospital since July 1969. The residency training program began in July 1970. During this period of time we have had the opportunity to treat a number of cases of head and neck cancers. The following is a review of our experience with head and neck cancer from July 1969 through October 1971.

A total of 92 patients with head and neck cancers were seen and treated in that 28 month period. During the first twelve months only seventeen of these were treated, whereas the other seventy-five were treated in the other sixteen months. The later increase in the number of cases is felt to represent an increasing number of referrals to our growing department.

## STATISTICS

Of the 92 patients with cancer of the head and neck, 51 were seen at the University Medical Center and 41 were seen at the Veterans Hospital (Fig. 1). These patients have been grouped according to location of the lesion; that is, larynx, intraoral cavity, sinuses and nose, ear and mastoid, neck, nasopharynx, hypopharynx, and salivary glands. The incidence of the cancers in these various locations are illustrated in Figures 2 and 3.

Figure 1

UAMC-LRVAH OTOLARYNGOLOGY DEPARTMENT EXPERIENCE WITH CANCER OF THE HEAD AND NECK FROM JULY 1969 TO OCTOBER 1971		
UNIVERSITY MEDICAL CENTER	51	
LITTLE ROCK VETERANS HOSPITAL		41
TOTAL		92

Figure 2

	UAMC	VAH
1 Larynx	19	21
2 Sinuses (Antra)	5	2
3 Tonsils and Pillars	5	5
4 Tongue (Oral)	3	3
5 Tongue (Base) and Hypopharynx	2	3
6 Palate and Upper Gum	1	1
7 Floor Mouth and Lower Gum	2	0
8 Buccal Mucosa	2	0
9 Nasopharynx	3	0
10 Neck	2	2
11 Salivary Glands	1	1
12 Ear	2	1

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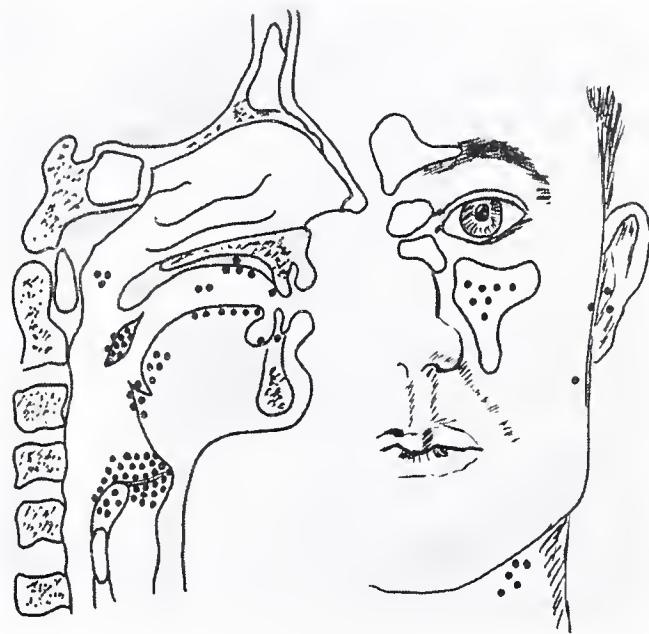


Fig. 3

● Represents Location of Lesions

Carcinoma of the larynx was the most common malignancy seen, followed closely by intraoral carcinomas. This incidence is similar to the incidence reported by the M. D. Anderson Hospital.<sup>3</sup>

In Figure 4 the types of cancers seen with their incidence are listed. Squamous cell carcinoma was the most common cell type encountered, comprising 77 of the 92 cancers seen or 84%.

## DISCUSSION

LARYNX — Carcinoma of the larynx represents about 2.1% of all admissions for cancer. Almost all are of squamous cell type. All of the 40 carcinomas of the larynx seen by our department were of squamous cell type. Fourteen or 35% were noted to have neck metastasis on initial exam, but none had distant metastasis. Four of these patients presented with neck masses with no known primary lesion. Two patients were also found to have solitary lung lesions and underwent thoracotomies with lobectomies.

Figure 4

	UAMC	VAH
SQUAMOUS CELL CA	39	38
ADENOID CYSTIC CA	5	0
MUCOEPIDERMOID CA	1	1
PAPILLARY CA	1	0
BASAL CELL CA	3	1
MALIG. SCHWANNOMA	1	0
LYMPHOMA	2	0

## OUR EXPERIENCE WITH CANCER OF THE HEAD AND NECK

These were felt to represent separate primaries. Lesions that do not involve the vocal cords may not cause hoarseness until late. Of the 40 carcinomas of the larynx seen, 20% had no hoarseness. Most of these patients complained primarily of a persistent sore throat. These facts point up the need for prompt examination and biopsy for early detection.

All of the patients smoked or had smoked tobacco heavily except one 91 year old female. The youngest patient was 44 years old.

**INTRAORAL CAVITY** — The most common sites of intraoral cancers were the tonsils and pillars (10), the tongue (10), and the palate (5). Most were of squamous cell type, but there were two lymphomas of the tonsil, two adenoid cystic carcinomas of the palate, and one mucoepidermoid carcinoma of the palate. One patient with adenoid cystic carcinoma of the palate with multiple metastatic nodules in his lungs underwent subtotal maxillectomy for control of the primary. Dr. Hollon Farr in the International Workshop of Cancer of the Head and Neck in 1965<sup>2</sup> mentioned similar cases of adenoid cystic carcinomas with multiple pulmonary metastasis that remained dormant for up to 10 years. In these cases surgical resection of the primary was recommended disregarding the chest findings. Six of the 17 intraoral cancers or 35% had cervical metastasis on initial exam. The lymphomas were treated with irradiation, whereas the rest were treated by irradiation, surgery, or a combination.

**SINUSES AND NOSE** — Seven cancers of the sinuses were seen, all of which appeared to originate in the maxillary sinuses. Four were squamous cell carcinomas, two were adenoid cystic carcinomas and one was a papillary carcinoma. Five of the seven patients had radical maxillectomies with exenteration of the orbit. Of these five patients, two have no evidence of recurrent or persistent disease at 18 months post operative. Two were lost to follow up and one died of cardiac arrest sixteen days post-op.

**EAR AND MASTOID** — Three cases were seen, all of which were basal cell carcinomas. Two began on the auricle and extended into the external canal or mastoid. One 73 year old patient underwent a temporal bone resection and the other two had local resection.

**NECK**—There were four cases in which the only evidence of disease was in the neck. One was a metastatic node in the right submandibular area in a patient who had a previous exenteration of his right eye for squamous cell carcinoma. One was a 14 year old black male with neurofibromatosis who had a huge malignant schwannoma which recurred after two separate attempts at resection and finally grew larger than his head. Another patient had a poorly differentiated carcinoma in a mass in the left submandibular area. He had one positive sputum for similar cells, but no primary lesion was found. The lesion was resected and no primary or recurrence has been identified after ten months of follow-up. The fourth patient had a cystic mass in the left submandibular area interpreted as a branchial cleft cyst by the pathologist. Floating within the cyst were malignant cells identified as squamous cell carcinoma cells. No other primary or recurrence has been noted at nine months post resection.

**NASOPHARYNX**—Three cases were seen; one each of poorly differentiated squamous cell carcinoma, adenoid cystic carcinoma, and lymphoepithelioma. Two of the three had cervical metastases on initial exam. The adenoid cystic carcinoma was resected and the other two lesions were irradiated.

**SALIVARY GLANDS** — Only two salivary gland carcinomas were seen. One was parotid squamous cell carcinoma which presented as a small painful, preauricular mass associated with partial facial nerve paralysis. The other was a mucoepidermoid carcinoma of the left submandibular gland. The patient died of heart disease two months following diagnosis and found to have widespread metastasis at autopsy. Approximately 25% of parotid neoplasms are malignant, whereas, 45% of submandibular neoplasms are malignant.<sup>1</sup>

### SUMMARY

A review of our experience with cancer of the head and neck over a 28 month period has been presented. A total of 92 cases were seen and treated. Carcinoma of the larynx was the most common cancer seen, followed closely by cancer of the intraoral cavity. It should be noted that 20% of the carcinomas of the larynx had no hoarseness at the time of diagnosis. Squamous cell carcinoma was the predominant type of malignancy in our series.

Treatment of these cancers of the head and neck included irradiation, surgery, or a combination of both, and occasionally chemotherapy or cryosurgery for recurrences or unresectable lesions (Fig. 5).

Many head and neck cancers can be cured if found early, and a significant number of advanced cancers can be cured or palliated with

Figure 5

<i>Treatment</i>	<i>No. of Cases</i>
I SURGERY	21
II RADIOTHERAPY	20
III COMBINATION OF I AND II	44
IV CHEMOTHERAPY	3
V CRYOTHERAPY	1

radical ablative procedures. Experience with patients who have terminal head and neck cancers soon convinces the skeptical physician of the value of a palliative resection. Significant advances have been made in the past two decades which permit satisfactory and functional reconstruction following radical ablative surgery of the head and neck. Few patients should be given up as hopeless.

#### BIBLIOGRAPHY

1. Conley, John: *Cancer of the Head and Neck*, 1967.
2. Conley, John: *Concepts in Head and Neck Surgery*, 1970.
3. MacComb, William S., Fletcher, Gilbert H.: *Cancer of the Head and Neck*, 1967.



#### Evaluation of Human Growth Patterns

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*American J Dis Child* 120:398-403 (Nov) 1970

Impaired somatic growth is common, and severe or prolonged interruptions of growth may have permanent side effects. The timing of such interruptions seems to be important and there may be three critical periods. The first period is during the final phases of gestation. The next period is from about 6 months to 2 years of age. Adolescence is probably a third critical stage. The proportion of poorly grown fetuses can not be reduced to the lowest possible level until the mothers themselves are well-grown and healthy, and are given a high standard of antenatal care in good socioeconomic surroundings. The problem of the malnourished toddler in the tropics, or in the poorest sectors of our own population, will not be solved until parents acquire the attitudes and the practical resources that have virtually solved the problem in the best advanced and sufficiently equipped sectors of advanced communities. The adolescents are trying to tell us that the only true basis of healthy growth and development is a healthful society. The evidence that retarded somatic growth has a statistical association with impaired neurological and intellectual development is convincing.

#### Asthma Induced by Adrenergic Aerosols

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*J Allerg* 46:156-173 (Sept) 1970

Thirty significantly symptomatic asthmatic patients were divided into two groups on the basis of the FEV<sub>1</sub> determined 60 minutes following isoproterenol inhalation. One group consisted of 18 patients who had a 10% or greater increase in the 60-minute post-isoproterenol FEV<sub>1</sub> as compared to base-line levels. Eight patients in this group overused isoproterenol aerosols. Discontinuation of isoproterenol by six of these eight patients and four other normal users failed to influence asthmatic symptoms. Of the other 12 patients, nine had a 60-minute FEV<sub>1</sub> near base-line levels, and three patients had a precipitous fall in the FEV<sub>1</sub> well below base-line levels after 60 minutes. Nine of these 12 patients greatly overused isoproterenol aerosols. Eight patients discontinued the isoproterenol, with dramatic clinical improvement noted immediately in seven. Pulmonary function studies were repeated in six of these patients following cessation of aerosol therapy and confirmed the marked improvement. Clinical data confirmed the induction and persistence of asthma as a result of adrenergic aerosol overuse. Pulmonary function data indicated that 60-minute post-isoproterenol FEV<sub>1</sub> is a reliable method of detecting such patients.

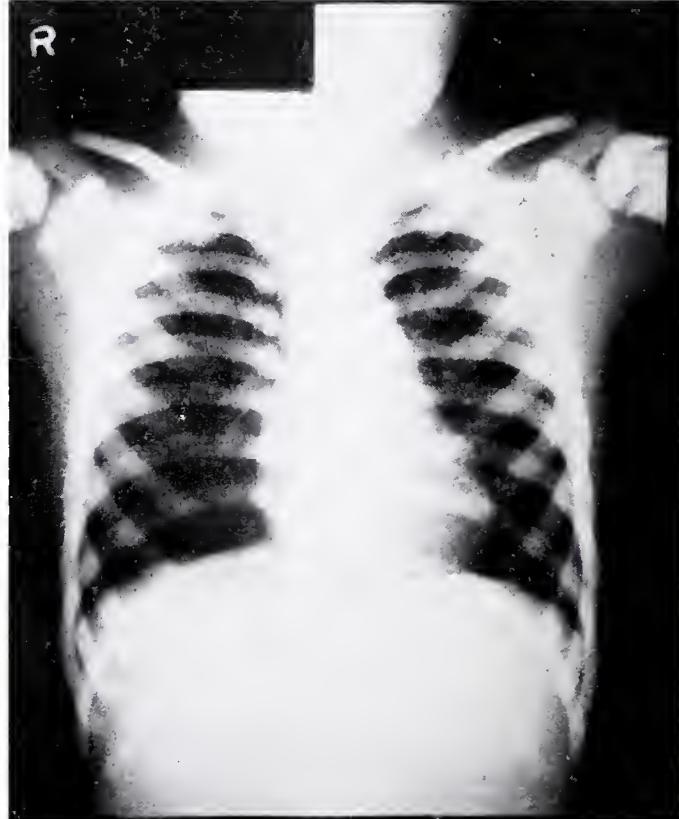
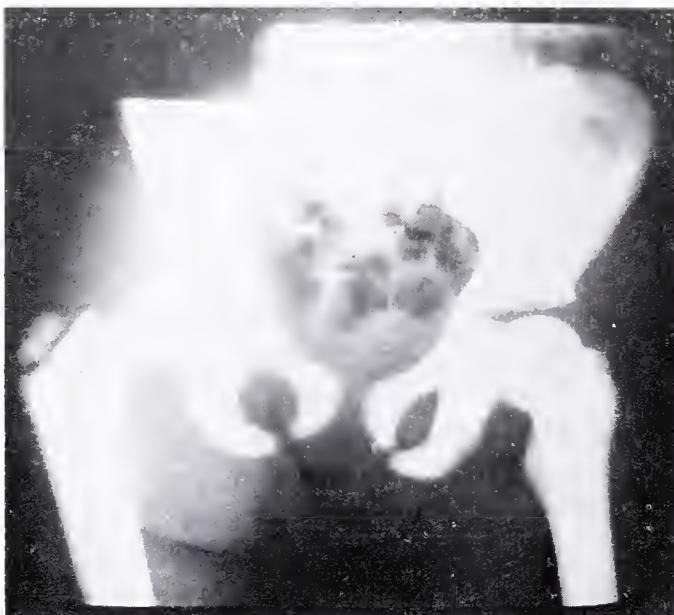
# RADIOLOGY



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**HISTORY:** This seven-year-old colored female was seen in the Emergency Room because of pain in the right hip. Films reveal a fracture of the right hip. Past history indicated the patient had sustained a fractured pelvis in 1968 at the age of four years. The patient has several siblings whose bones have a similar appearance. From these films, the Radiologist was able to make the proper diagnosis.

(See Answer on Page 98)



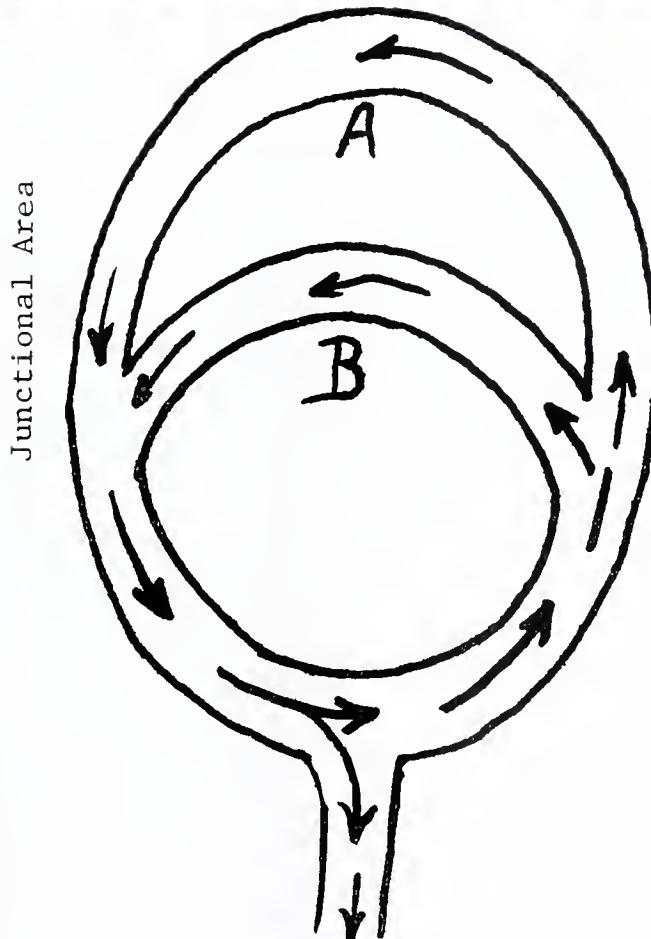
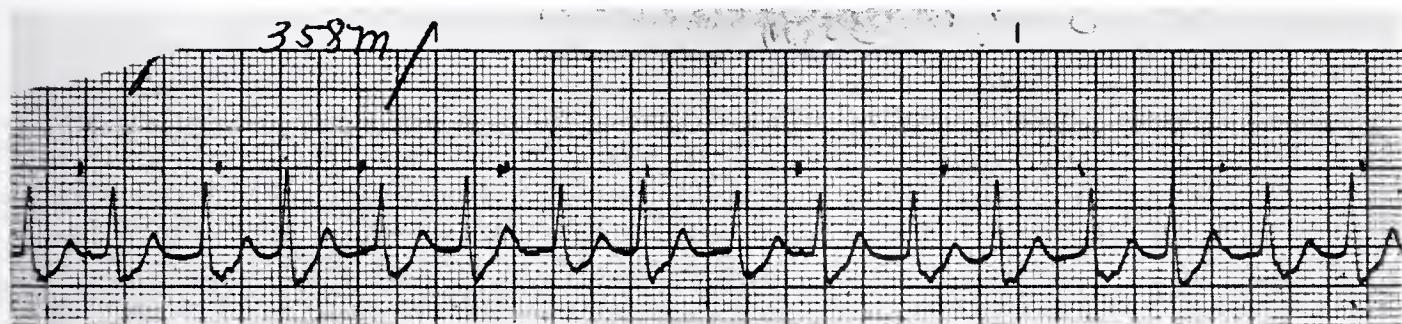


## ELECTROCARDIOGRAM

## OF THE MONTH

$V_2$  rhythm strip obtained on patient with recent infarction, being monitored in coronary care unit, having repeated bouts of this tachyarrhythmia.

(See Answer on Page 98)



to the

## Ventricles.

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## Laboratory Aids in the Diagnosis of Gonorrhea

Robert T. Howell, Dr.P.H.\*

Where once the laboratory methods in the diagnosis of gonorrhea were limited to the gram-stained smear of urethral or cervical exudates or, when the laboratory was close to the doctor's examining room, culture on chocolate agar plates, the development of Thayer-Martin medium (Thayer and Martin, 1966) and Transgrow Medium (Martin and Lester, 1971) have added new tools for use of the laboratorian to aid the physician in his diagnosis. Particularly this has proven useful in diagnosis of the asymptomatic female. Cultures can now be made anywhere, from any body site, and submitted to a distant laboratory with reasonable expectation of a satisfactory test.

In the male patient exhibiting symptoms of gonorrhea, demonstration of the gonococci by Gram-stain of the urethral exudate is an effective, quick, and inexpensive test. A cotton or dacron swab is made of the exudate or by scraping the mucosa of the anterior urethra, gently rolled on a microscope slide, stained by Gram's stain (preferably using acetone or acetone-alcohol as a decolorizing agent) and examined under the microscope. Demonstration of the Gram-negative diplococci intracellular in a pus cell is diagnostic. Use of culture procedures can be reserved to those situations where microscopic methods are not conclusively positive, to extra-genital lesions or sites, in cases of early diagnosis of g.c. contacts, or in tests to insure adequacy of treatment. Cultures can also be made from the anal canal in the case of male homosexuals.

In the female patient, microscopic examination of swabbings from the cervical or vaginal area has not been entirely satisfactory, particularly in

the asymptomatic patient. The microscopic films contain little or no pus and the presence of large numbers of other organisms tends to interfere with recognition of the gonococci.

Fluorescent antibody staining of direct microscopic films did not greatly improve the efficiency of microscopic examinations, although this technique can be used successfully in special cases, i.e. confirmation of culture isolations, in examinations of skin lesions, in conjunctivitis, or when culture is impossible such as following antibiotic treatment, but not as a test of cure (Peacock *et al*, 1968).

Use of the Thayer-Martin medium, made highly selective by the inclusion of vancomycin hydrochloride, calistomethate sodium, mystatin and trimethoprim lactate, has made it possible to culture the cervix, urethra, vagina, or rectum with little interference from the normal flora of these sites with sensitivity approaching 90 per cent when culture of both cervix and anal canal is attempted (Caldwell *et al*, 1972).

Thayer-Martin medium may be purchased ready for use from a number of commercial supply houses or it may be prepared as directed by the authors with the addition of the previously named inhibitors and poured into petri dishes. Whether the laboratory prepares its own or purchases its Thayer-Martin and/or Transgrow medium, there are several precautions that should be taken. The amount of media in the dish or bottle should be adequate to protect against drying, it should be sterile, and it should support test dilutions of laboratory strains of *N. gonorrhoeae* without inhibition. The CO<sub>2</sub> level in Transgrow should be tested on at least two bottles of each lot. There should not be excessive liquid in the bottles. The media is stored in the

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refrigerator and the plates or bottles are removed from the refrigerator and kept at room temperature for at least an hour before inoculation. Inoculation of the specimen onto cold media will kill the gonococci.

Swabs are taken from the patient and carefully streaked on the medium which is then (within 15-20 minutes) placed into a candle jar or in a carbon dioxide incubator and incubated for 24 to 48 hours. A simple candle jar can be made from a 1-gallon wide-mouth pickle jar, a slide and a small candle. The candle is lighted, placed into the jar and the lid tightened. When the candle goes out the atmosphere within the jar will be approximately 9-10% CO<sub>2</sub>, the level best for growth of the gonococci. The cultures may be examined for growth at 24 hours and returned to the jar for an additional day if there is insufficient growth.

Transgrow medium is essentially the same as Thayer-Martin medium except one per cent additional agar and 0.15 per cent glucose is added to make the media more durable for shipment. It is put into media bottles (1 oz. prescription bottles) with screw caps so that a CO<sub>2</sub> atmosphere can be added and maintained in the bottle. Since carbon dioxide is heavier than air, care must be used to keep the bottle upright when the cap is loose or off to prevent pouring off the CO<sub>2</sub>. Sufficient CO<sub>2</sub> will remain if handled carefully during inoculation to get the culture started. This culture, following inoculation, can be shipped to a central laboratory for isolation and identification of the organisms. It has been found that incubation of the Transgrow media following inoculation for 12-16 hours will greatly im-

prove the growth and survival of the *Neisseria* organisms during shipment to the laboratory.

Both media are highly selective for *Neisseria gonorrhoeae* and *Neisseria meningitidis* but some streptococci, staphylococci, and yeasts may also grow out on the media and identification of the growth by use of the oxidase test and microscopic examination is required. The shelf life of the media is 60-90 days. After that time some of the inhibitors begin to break down and there will be less inhibition of contaminating organisms. Cultures from extragenital areas or in legal situations should be confirmed also by use of sugar fermentation tests or specific fluorescent antibody staining.

The oxidase test is performed by adding a drop of freshly prepared N-N dimethyl-p-phenylenediamine monohydrochloride to the *Neisseria*-like colony. If it is *N. gonorrhoeae* or *N. meningitidis* the colony will turn pink to maroon to black and remain black. (Other oxidase reagents may be used; each will give its own variation of color change.) Occasional staphylococci, several streptococci, and several yeasts will also give positive oxidase test results so microscopic demonstration of the Gram-negative gonococci is necessary. The biochemical reactions of the *Neisseria* are given in Table I.

The Bureau of Laboratories is currently providing the laboratory services for the gonorrhea eradication program being started by the State Department of Health. It is hoped that other laboratories throughout the state will also be starting or increasing culture programs to halt this epidemic of gonorrhea. To assist them the Bureau will be happy to provide consultative

TABLE I. Cultural and Fermentation Reactions\* of *Neisseria* species

ORGANISM	Growth on T-M Media	Oxidase Test	Growth at 22° C	Pigment	Glucose	Maltose	Sucrose	Lactose	Fructose	Mannitol	ONPG**
<i>N. gonorrhoeae</i>	+	+	-	0	+	-	-	-	-	-	-
<i>N. meningitidis</i>	+	+	-	0	+	+	-	-	-	-	-
<i>N. catarrhalis</i>	-	+	+	0	-	-	-	-	-	-	-
<i>N. sicca</i>	-	+	+	0	+	+	+	-	+	-	-
<i>N. hemolysans</i>	-	+	+	+	+	+	+	-	+	-	-
<i>N. flava</i>	-	+	+	+	+	+	-	-	+	-	-
<i>N. perflava</i>	-	+	+	+	+	+	+	-	+	-	-
<i>N. subflava</i>	-	+	+	+	+	+	-	-	-	-	-
<i>N. flavescens</i>	-	+	+	+	-	+	-	-	-	-	-
<i>N. lactamica</i>	+	+	-	+	+	+	-	+	-	-	+

\*Fermentation reactions in cystine trypticase agar base.

\*\*ONPG is Beta-d-galactosidase media

services and bench training of technicians and technologists where needed, and can serve as a reference laboratory for culture problems.

Caldwell, J. G., Price, E. V., Pazin, G. J., and Cornelius, C. E., III, 1971. Sensitivity and Reproducibility of Thayer-Martin Culture Medium in Diagnosing Gonorrhoea in Women. Amer. J. of Obstetrics and Gynecology 109:(3) 463-468.  
 Martin, J. A., Jr., and Lester, A., 1971. Transgrow, a Medium for Transport and Growth of *Neisseria Gonorrhoeae* and *N. Meningitidis*. Pub. Health Rep. 86: (1) 30-33.

*rhoeae* and *Neisseria Meningitidis*. HSMHA Health Rep. 86: (1) 30-33.  
 Peacock, W. L., Jr., Welch, B. G., Martin, J. E., and Thayer, J. D., 1968. Fluorescent Antibody Technique for Identification of Presumptively Positive Gonococcal Cultures. Pub. Health Rep. 83: (4) 337-340.  
 Schroeter, A. L. and Pazin, G. J., 1970. Gonorrhea. Annals of Internal Medicine 72:(4) 553-559.  
 Thayer, J. D. and Martin, J. E., Jr. 1966. Improved Medium Selective for Cultivation of *N. Gonorrhoeae* and *N. Meningitidis*. Pub. Health Rep. 81:559-562.



## PROCEEDINGS OF SOCIETIES

### Washington County

On July 2, 1972, in Fayetteville, the Washington County Medical Society held a centennial celebration. Members of the county society and guests met at the Southwestern Electric Power Company building at 2:00 P.M. to observe the 100th anniversary of the founding of the county society. Dr. Anthony DePalma, Dr. Ruth Lesh, and Dr. Friedman Sisco made up the Centennial Committee.

Dr. John Boyce, president of the Washington County Medical Society, presided for the cen-

### ANSWER—Electrocardiogram of the Month

There is A-V dissociation. The atrial rate is 84/min. The ventricular rate is approximately 132/min. The RR interval varies with a consistent pattern. There are short cycles of 420 msec duration which alternate with longer cycles of 500 msec duration. The position of the P wave has no effect on the ventricular response, and the shorter R-R cycles therefore are not atrial capture beats. This represents a junctional tachycardia. In all probability it has a re-entrant mechanism which sustains it, and the alternating cycle length may be envisioned as diagrammed in the accompanying schematic. The two re-entry pathways are employed first one, and when it is refractory, then the other. There is considerable variation in the timing of the S waves which suggests intermittent atrial capture in a retrograde fashion by the junctional pacemaker.

Although no specific conclusions can be drawn from this V2 rhythm strip regarding the ST segment, the J point is unusually depressed and may reflect underlying myocardial injury.

tennial program. Invocation was by Dr. Ed Wheat. Dr. Stanley Applegate introduced the principal speaker, Dr. Robert Watson of Little Rock, president of the Arkansas Medical Society. Dr. Max McAllister and Dr. DePalma also participated in the program, recalling events in the history of the Washington County Medical Society.

The Woman's Auxiliary to the Washington County Medical Society served refreshments following the program. Mrs. Tom S. Whiting is president of the Auxiliary.

### ANSWER—Radiology Case of the Month

#### DIAGNOSIS:

Osteopetrosis. (Alvers-Schonberg Disease, Osteosclerosis fragilis generalisata, osteopetrosis generalisata, marble bones, chalk bones.)

#### DISCUSSION:

Osteopetrosis is a rare inherited bone abnormality. The primary defect is a failure of absorption of primary spongiosa in the process of enchondral bone formation. Vascular mesenchyme which would erode this tissue is absent leading to increase in bone density. An enzyme deficiency may be the basis for this condition. The epiphysis, metaphysis, and diaphysis are all involved. Blood studies may range from normal to marked depression of all elements. The most commonly encountered abnormality is a normocytic normochromic anemia. There is no correlation between the severity of the anemia and the degree of bone disease. Though these bones appear quite strong, they are brittle, fracture easily, and heal poorly. Skull deformities may include narrowing of optic foramen and optic atrophy. Radiologically, the most characteristic feature is the uniform symmetrical increase in bone density with loss of distinction between the cortex and medulla. All bones and all components of bones may be involved. There is frequently widening of the diaphysis of long bones giving the "Erlenmeyer-Flask" appearance. A feature that sometimes helps to distinguish osteopetrosis from other causes of bone sclerosis is a miniature inset of an earlier bone within the confines of a larger bone. This "bone within a bone" appearance is due to the intermittency of the process.



## EDITORIAL

# Patient-side Versus Desk-side Nursing

## An Experiment and Change at Baptist Medical Center

Anna Lee Sanders and Shirlene Harris\*

The rapidly growing, revived interest of professional nurses in direct patient care, extended roles and distributive care has initiated a reorganization in nursing practice and education. The patient, who is the prime reason for the existence of health institutions and nurses, complains, "I never see a Registered Nurse." He identifies "his" nurse as either a Licensed Practical Nurse or an auxiliary employee.

Hospitals are the chief employer of nurses. Evidenced in the hospital is the problem that baccalaureate graduates are failing to maintain a continuing employment in these institutions.

Nurse educators express the belief that hospitals are not utilizing the new baccalaureate graduate in the roles and functions harmonious with her academic preparation. They are concerned also about the lack of learning continuity which is a pre-requisite of professional practice. Coordination of new knowledge and techniques and the practical implementation in the laboratory setting of the hospital appears to be limited.

The physician complains: "The least prepared person assists me in physicals, interviews, diagnostic tests, treatments and the planning of patient care," and "Valid information about the patient's status which would contribute to my therapeutic plan, is difficult to obtain due to the present method of 'nurse communications'."

The new baccalaureate graduate complains: "I'm expected to function in roles for which I am not prepared; the hospital does not provide a system in which I can practice; the physician

does not understand the preparatory roles of the baccalaureate nurse, and there is a lack of opportunity to contribute to the management of nursing care."<sup>1</sup> In view of the prior expressions by the people involved in the health care system, the Baptist Medical Center at Little Rock, Arkansas, and the State College of Arkansas at Conway, decided to attempt an alleviation of the problems. Nurses discussed what could be done to provide a new approach to patient care and to get nurses back to the patient's side to perform direct patient care. An idea was conceived and germinated. Discussions and a review of literature ensued. Thus, the plans for an individualized patient-centered care unit were launched.

A committee, which was composed of nursing practitioners and educators, was organized and given the task of formulating the purposes, designs and functions of the unit. The first meetings were addressed to the current problems in practice and education and the consideration of possible solutions to be submitted as proposals to the participating institutions. As meetings and discussions progressed, interest and enthusiasm about the possibility of the establishment of individualized patient-centered care units soared to its zenith. A review of the literature revealed that similar programs were being instituted across the nation with the writings communicating achievement of improved nursing care and increased nurse job satisfaction.<sup>2,3,4,5,6,7</sup> The Committee recognized the first and foremost purpose of the unit is to provide quality as well as quantity patient care via a different approach in the delivery of nursing care. Simply stated, the

\*R.N., and Clinical Faculty Appointee of Baptist Medical Center and State College of Arkansas.

proposed goals and purposes of the individualized patient-centered care units are:

- To provide a high quality of individualized patient-centered care, twenty-four hours per day. This would not exclude the patient's family in the planning of the patient's care.
- To provide information from which nurse educators and nursing service directors may develop guidelines for the development of curriculums, inservice education, nursing practice and staffing patterns.
- To provide an environment for nursing students to experience a continuation of learning between the theoretical content received in the classroom and clinical practice.
- To provide an environment conducive for research and the implementation of the results into nursing practice.
- To provide an environment in which new graduates gain confidence and technical skills.
- To demonstrate a cohesive collaborating relationship between all levels of nursing practice, as a team, which is rightfully termed the "front line of patient care."
- To develop tools for evaluating nursing effectiveness in terms of patient progress or behavior.
- To depart from traditional nursing functions and unit organization in an effort to involve all nurses on the unit in the giving of direct bed-side care.
- To involve all hospital departments as well as community agencies who are concerned with health care in their efforts to alleviate human suffering.
- To involve the physician and the nurse as collaborators in the giving of care.
- To retain baccalaureate nurses on the hospital staff by providing an atmosphere and system of care which would permit her to practice according to her academic preparation.

In selecting a patient unit to demonstrate a different approach for nursing care, prime considerations were given to the medical staff whose support and assistance would be vital to the success of the program. The patient population for

the first unit will consist primarily of medical patients. The nursing staff whose responsibilities are total patient-side nursing care will staff the unit. The staff nurses will concentrate their energies on the individualized needs of the patient for nursing care services. For each patient admitted to the unit, a nursing care history will be obtained. From the assessment of the patient, the nursing care history and the discussion of the needs of patients with the physician, the nurse will formulate and implement a nursing care plan. The nursing care plan will serve as a tool for communicating nursing orders and evaluation of nursing care from one shift to the next; the result being a more coordinated effort in the management and continuity of nursing care.

The initial staff on the unit will consist of a Dual Role Appointee (Service-Education), baccalaureate graduates, two diploma graduates, nursing assistants, unit managers and ward clerks. The baccalaureate nurses will be responsible for the nursing management of patient care. The non-nursing functions of the unit will be assumed by a unit manager assisted by ward clerks. The staffing pattern will be flexible and altered as the program progresses.

Decentralization will be a unique characteristic of the unit. This will be accomplished through the use of "Porta-desks" especially designed to contain the patient's chart and medications. These can be transferred from one area to another.

The promoters of this program recognize that its effectiveness must be measured. The final proof of its worth will be found in the degree of achievement of the stated purposes in terms of the quality of care given, patient and family satisfaction, nurse attrition and job satisfaction and patient recovery rate.

"The primary function of nursing practice must, of course, be performed in such a way that it promotes the physicians therapeutic plan."<sup>8</sup> The proposed approach is a sincere effort to promote the physicians plan of care. Baccalaureate nurses are academically prepared to assess the patient's needs, plan for his care, implement the plan and evaluate the therapeutic effect of the care. They possess the knowledge and skills to coordinate and implement the type of individualized patient-centered care to which each patient

is entitled. The participant planners of this program acknowledge the leading role of the physician in making this approach to nursing care a success.

1. Marlene Kramer, "Role Models, Role Conceptions and Role Deprivations," *Nursing Research*, March-April, 1968, pp 115-120.
2. Esther Lucille Brown, *Nursing Reconsidered, A Study of Change*; Part I, (Philadelphia: J. B. Lippincott Co., 1970), pp 45-46, 78-84, 110-111.
3. Helen Beath, "A Prototype for Nursing Service," *Nursing Clinics of North America*, 6:343-351, June, 1971.

4. Rosamond Gabrielson, "A Nursing Service Director's View," (Paper read at the University of California on "Continuing Education in Health Sciences," July 29-July 3, San Francisco, California).
5. Rozella Schlotfeldt and Jannetta MacPhail, "An Experiment in Nursing: Part I, II, III," *American Journal of Nursing*, 69:1018-1023, May, 1969, 69:1247-1251, June 1969, and 69:1475-1480, July, 1969.
6. Ruth Stryker, "What? No Head Nurse?", *Nursing Outlook*, 14:36-37, November, 1966.
7. Cynthia Henderson, "Can Nursing Hasten Recovery?", *American Journal of Nursing*, 64: 80-83, June 1964.
8. Virginia Henderson, "The Nature of Nursing," *Nursing Trends* ed. Virginia Dryden (2nd ed.; Dubuque: William C. Brown Co., 1969), p. 12.



## THINGS TO COME

### Hospital Medical Staff Conference

The Office of Postgraduate Medical Education, University of Colorado School of Medicine, will conduct a Hospital Medical Staff Conference, September 24-29, 1972, at the YMCA Conference Center, Estes Park, Colorado. For further information contact The Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colorado 80220.

### Coronary Care Courses Offered

The University of Arkansas Medical Center and the Arkansas Regional Medical Program are planning to present the basic course in Coronary Care for physicians (Dr. Davis' five day course) in the fall of 1972. Any interested physicians may contact the Department of Continuing Education.

Physicians interested in attending a one or two day seminar in Coronary Care this fall may also contact the University of Arkansas Medical Center, Department of Continuing Education, specifying either basic or advanced course.

### Medicine-Religion Symposium

A Statewide meeting of physicians and ministers is scheduled for October 28th at the University of Arkansas Medical Center. Dr. Milford

O. Rouse of Dallas, Texas, and Dr. Richard Halverson of Washington, D. C., will be the keynote speakers.

### Cancer Chemotherapy Conference

The Tenth Annual Cancer Chemotherapy Conference will be held at the University of Wisconsin, Madison, September 6th through 8th. For information contact Dr. G. Ramirez, 714C University Hospitals, Madison, Wisconsin 53706.

### Congress on Occupational Health to be Held

The American Medical Association's Thirty Second Annual Congress on Occupational Health will be held September 11-12, 1972 at the Drake Hotel, Chicago, Illinois. The Congress program is acceptable for twelve elective hours by the American Academy of Family Physicians.

### Seminar on Hand Injuries

A seminar pertaining to management of the injured hand, presented by the Hand Rehabilitation Center at Washington University, will be held on September 9, 1972, at the Cori Auditorium in the Washington University School of Medicine, St. Louis, Missouri. The program, entitled "Industrial Injuries of the Hand—Tendon Trauma", is acceptable for five prescribed credit hours by the American Academy of Family Physicians. Topics of discussion will be "Functional Anatomy of Tendons"; "Reaction of Tendon to Injury"; "Primary Repair of Flexor Tendons"; "Primary Repair of Extensor Tendons"; "Decision: Primary Repair vs. Tendon Graft"; "Management of the Lacerated Tendon—Bony Fracture Complex"; "Rehabilitation Measures for Restoring Tendon Gliding" and "Problem Cases".



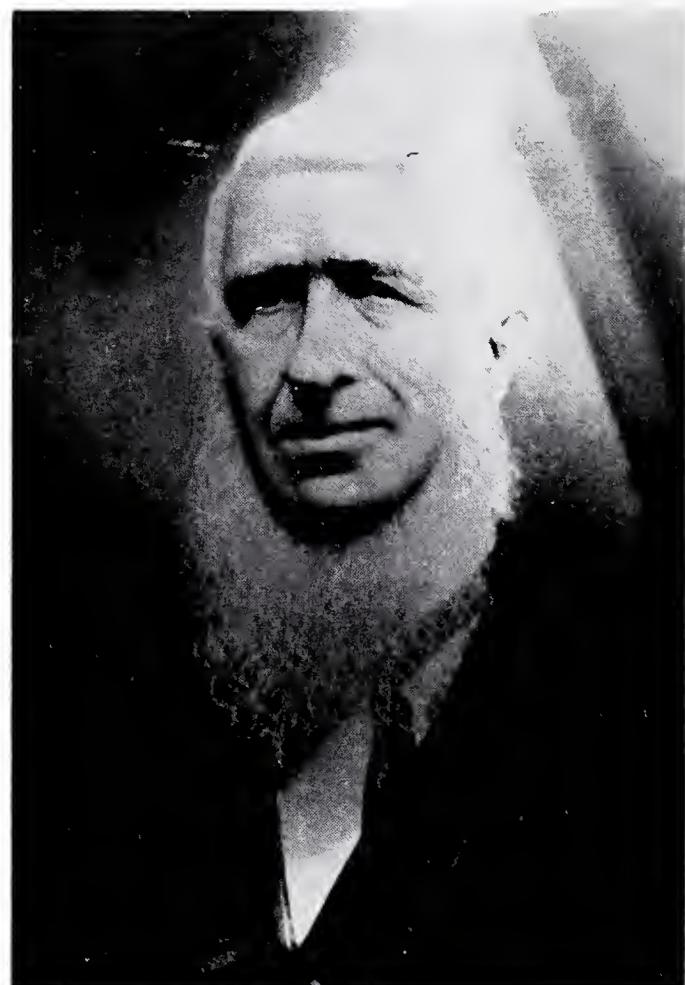
## Washington County Medical Society Centennial

Anthony T. De Palma, M.D.\*

An event of special significance occurred one hundred years ago in Fayetteville, Arkansas. On Tuesday, July 2, 1872, the Washington County Medical Society was organized. Those who signed the constitution at the office of Dr. T. J. Pollard on that memorable day were: Drs. T. J. Pollard, W. B. Welch, S. F. Paddock, R. J. Carroll, George W. Holcomb, E. F. Brodie, H. D. Wood, F. N. Littlejohn, John M. Lacy, and John C. Grace. They elected Dr. T. J. Pollard as president, Dr. W. B. Welch as vice president, Dr. R. J. Carroll as recording secretary, Dr. J. C. Grace as correspondent, and Dr. George W. Holcomb as treasurer. Dr. W. S. Wynne and Dr. J. C. Homma were present at the meeting but their names do not appear on the roster of members.

Dr. T. J. Pollard's election as president of the Washington County Medical Society was a recognition of esteem the charter members had for him. Others have mentioned him to be venerable, a real Titan among the early practitioners, a man of highest attainments who would have ranked with those of the greatest ability in any large city. He identified himself with everything considered as the best interest of the people—politically, socially, and educationally, as well as medically.

Two of our founding members were destined to become president of the Arkansas Medical Society. Dr. W. B. Welch, one of the most distinguished physicians ever to practice in the county, was elected the first president of the State Medical Society of Arkansas (Arkansas Medical Society) in 1875. The other member elected president was Dr. H. D. Wood. It was said of him, "Nothing could be so fitting and so beautiful in sentiment as to bestow the honor



Dr. T. J. Pollard

of heading the Arkansas Medical Society, at its fiftieth jubilee anniversary, upon one of the three surviving charter members, namely, Dr. H. D. Wood of Fayetteville."

The history of medicine in Washington County is an exciting story of men and deeds. During our hundred year span of organized medicine, seven members have become president of the Arkansas Medical Society: Drs. W. B. Welch, Frank B. Young, E. F. Ellis, H. D. Wood, Will

\*220 South School Avenue, Fayetteville, Arkansas 72701.

H. Mock, Fount Richardson, and Stanley Applegate. In December 1956, nine members had a combined age of approximately 700 years and represented a combined total medical practice of approximately 500 years. They exemplified service to man and community in the best tradition of medicine.

Currently, ninety physicians are members of the Washington County Medical Society. We have inherited the mantle of medical practice from our predecessors. May their concern, courage, and conviction in alleviating man's ills and suffering guide us through the future.

#### BIBLIOGRAPHY

Committee on the History of the Arkansas Medical Society. Dr. Frank Vinsonhaler, chairman. History of the Arkansas Medical Society, Fort Smith, Arkansas, 1943.

Ellis, Elizabeth Dupree: A History of the Pioneer Physicians of Washington County, Arkansas. Journal of the Ark. Med. Soc. 48:78-86, 1951.

Journal of the Ark. Med. Soc. Editorial. 22:23-24, 1925.

Journal of the Ark. Med. Soc. Features. 53:309, 1957.

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#### Diapulse Units Seized

The Food and Drug Administration has announced the seizure of two Diapulse devices. The manufacturer, Diapulse Corporation of America, has been permanently enjoined from shipping or selling its product in interstate commerce.

The seizure action was against Diapulse units in possession of a Norfolk, Virginia, hospital. It is the first of a number of seizure actions the FDA expects to take as a result of a recent court ruling.

Over 4,000 Diapulse devices have been distributed throughout the United States and in several foreign countries. Purchasers include hospitals, clinics, medical doctors, chiropractors and other practitioners who have paid \$2,400 to \$3,000 for each machine. The Diapulse resembles a conventional diathermy machine which is used to produce deep heat treatment. FDA has concluded, however, that on the basis of laboratory and clinical tests there are no known therapeutic benefits to be derived from the use of the Diapulse. This view has now been supported by the courts. In October 1969 the Government stopped paying claims under the Medicare program for Diapulse treatment.

**Note:** The Department of Health, Education and Welfare, Public Health Service, Food and Drug Administration has announced that anyone

in Arkansas wishing to offer voluntarily to destroy his device, otherwise render it inoperable, or surrender the device to FDA may do so by contacting one of the following Food and Drug Administration offices: Room 508, Post Office Building, Post Office Box 1658, Little Rock, Arkansas, Telephone 501-372-4361, Ext. 5257; 702 North "A" Street, Post Office Box 1227, Fort Smith, Arkansas, Telephone 501-782-0911.

#### Physician Designated Examiner

Dr. C. Allen McKnight, a Little Rock gynecologist, has been chosen by the State Medical Examiner as the physician responsible for examining every alleged rape victim in the State who files a complaint through a law enforcement agency. (Only the police can call in Dr. McKnight.) The program, which was begun in February, was originally designed to have Dr. McKnight act as the head of a chain of examiners scattered throughout the State. However, the chain has not yet been established and the responsibility for examining rape victims in counties other than Pulaski is still mainly left to the discretion of the enforcement agency desiring the examination. The agency has three possible courses of action, (1) find a local doctor willing to examine the victim, (2) transport the victim to Little Rock for Dr. McKnight to examine, or (3) let Dr. McKnight designate a local physician to make the examination for a small fee.

#### Fifty Year Club

During the annual meeting of the American Medical Association in San Francisco in June, the Fifty Year Club of American Medicine presented a \$2,500 contribution to the AMA's Education and Research Foundation. The presentation was made by Dr. Davis W. Goldstein of Fort Smith. Dr. Goldstein was given a standing ovation by the AMA House of Delegates.

#### Amen To The Wall

From inability to let well alone;  
from too much zeal for the new  
and contempt for what is old;  
from putting knowledge before wisdom,  
science before art, and cleverness before  
common sense,  
from treating patients as cases, and from  
making the cure of the disease more  
grievous than the endurance of the same,  
Good Lord, deliver us.

Sir Robert Hutchinson



## PERSONAL AND NEWS ITEMS

### New Medical Building

Ground breaking ceremonies were held in June for the new Medical Towers, Inc. in Little Rock. The building will be owned as well as occupied by physicians and dentists, who make up its Board of Directors and officers. Dr. H. A. Ted Bailey is president of the owning corporation and Dr. James R. Bearden is secretary. They, along with Dr. John Allen and Dr. C. Allen McKnight, make up the Executive Committee. The building will be adjacent to the new Baptist Medical Center now under construction, and will be connected with the entrance lobby of the Medical Center. The first floor of the twelve-floor structure will be occupied by medically related commercial facilities. The remaining floors will accommodate approximately eighty physicians and dentists. The building is expected to be occupied by January 1, 1974.

### Physicians Announce New Associates

Dr. M. C. Edds announces the association of Dr. W. A. Williams, Jr., with him in the practice of medicine at the Edds Clinic in Van Buren.

Dr. Joel Mills has recently become an associate of Dr. Robert L. Taylor and Dr. Robert L. Clark in Conway.

### Doctor Locates in Waldron

Dr. Jose Rodriguez began the practice of medicine in Waldron in July. He occupies the office formerly used by Dr. James Jenkins. Dr. Rodriguez had previously been associated with the Tuberculosis Sanatorium at Booneville.

### Dr. Toon Attends Course

Dr. D. L. Toon of Crossett attended the University of Colorado School of Medicine's General Practice Review at Estes Park in June. Dr. Toon was one of about 400 physicians participating in the six-day postgraduate course.

### Physician Elected to House Staff Post

Dr. Larkus Pesnell of El Dorado has been elected executive secretary of the National House Staff Coalition. Dr. Pesnell is a resident in Pathology at the University of Arkansas Medical Center. The Coalition is a group of young physicians providing a voice for interns and residents on health, economic and social issues.

### Physician Elected

Dr. David L. Lockhart of Forrest City has been elected to active membership in the American Academy of Family Physicians.

### UAMC Graduate Honored

Dr. David W. Frederick, a 1971 graduate of the University of Arkansas School of Medicine, has been honored by being selected a Mead Johnson Fellow. Only sixteen of these Fellowships are awarded annually on the basis of merit to those aspiring to family practice. Dr. Frederick recently completed his first year in the Family Practice Residency Training Program at Lancaster General Hospital, Lancaster, Pennsylvania.

### Doctor Locates in Berryville

Dr. Dillard Griffith, a specialist in gynecology and obstetrics, has opened an office at 210 South Main Street, Berryville.

### RMP Consultants Meet with Physicians

Dr. Hugh Higginbotham of Fayetteville met with physicians in the Berryville area on June 13th. Dr. Robert Abernathy of Little Rock met with physicians in the Batesville area on June 20th. Dr. Higginbotham and Dr. Abernathy are consultants in the Advisory Committee for Rural Medical Extension Service program, a University of Arkansas Medical Center project funded by the Arkansas Regional Medical Program.

### Dr. Saltzman Reports on Tour

Dr. Ben N. Saltzman of Mountain Home, a member of the National Advisory Health Services Council of the Health Services and Mental Health Administration of the Department of Health, Education and Welfare, recently gave a report to the organization on the trip he and another physician made to England this Spring to study that country's national health services plan. Dr. Saltzman and Dr. Ed Calhoon, a member of the Council from Beaver, Oklahoma, spent two weeks visiting with physicians throughout England.

### Dr. Saltzman Attends Convention

Dr. Ben N. Saltzman of Mountain Home was one of about 17,000 Rotarians from 65 countries attending the annual convention of Rotary International at Houston in June. Dr. Saltzman

served during the convention as chairman of the credentials committee.

#### **Physician Elected to AAFP**

Dr. Thomas H. Wortham of Jacksonville has been elected to active membership in the American Academy of Family Physicians.

#### **Offices Burglarized**

The offices of three North Little Rock physicians were burglarized in June. Offices of Dr. Thomas P. Rooney, Horace Pool and F. S. Paterek were entered through windows; nothing was found missing.

#### **Physician Locates in Bentonville**

Dr. Willard H. Howard, Jr., has opened an office for the practice of medicine and surgery at 216 North Main, Bentonville.

#### **Dr. McPhail Guest Speaker**

Dr. Jasper L. McPhail of Little Rock was the guest speaker at the June meeting of the Batesville Jaycees and Jaycettes.

#### **Doctor Joins Clinic**

Dr. Joseph H. Lyford, an ophthalmologist, has joined the staff of the Gardner-Mobley-Lovell Clinic in Russellville.

#### **Physicians Re-elected**

Dr. Thomas A. Formby of Searcy and Dr. H. D. Luck of Arkadelphia have been re-elected to the American Academy of Family Physicians.

#### **Officers Chosen**

The following physicians were chosen as officers of the Arkansas Chapter, American College of Surgeons, at the annual meeting of the group which was held June 16 and 17 at the Red Apple Inn in Heber Springs: Dr. David Yocom of El Dorado, president; Dr. Porter Rodgers, Jr., of Searcy, president-elect; and Dr. Fred Caldwell of Little Rock, secretary-treasurer. Dr. Warren Murry of Fayetteville, Dr. William Cooper of Little Rock, Dr. Gilbert Campbell of Little Rock, and Dr. Samuel Landrum of Fort Smith will serve as councilors; Dr. Rhys Williams of Harrison will serve as councilor-at-large.

#### **Physician Recipient of Award and Citation**

Dr. Hugh F. Burnett of Pine Bluff was presented the Outstanding Intern award for 1972 by the medical staff of Charity Hospital of Louisiana, Tulane University Division. The award was presented to him on June 27th.

During the annual banquet of the Owls Club of the Tulane University School of Medicine, held in early May, Dr. Burnett was cited as "outstanding intern". The Owls Club is a medical student organization dedicated to better student-faculty relationships.

Dr. Burnett is the son of Dr. and Mrs. H. L. Wineland of Pine Bluff. He is a 1971 graduate of the University of Arkansas School of Medicine.

#### **Physician Joins Dr. Banister**

Dr. Dennis Davidson has joined Dr. Bob Banister in his practice at 1300 Parkway, Conway. Dr. Davidson is a family physician.

#### **Councilors Participate in 4-H O-Ramas**

Each of the following councilors recently participated in the Health Activity contest of the 4-H O-Rama within their respective councilor districts: Dr. Raymond Irwin of Pine Bluff, Dr. L. J. Pat Bell of Helena, and Dr. John B. Kirkley of Jonesboro. The contests were created to stimulate the interest of 4-H boys and girls regarding some aspect of personal, family, or community health. The first place winners in both age groups (9-13 and 14-19) receive a trophy from the Arkansas Medical Society and are eligible to participate in the State 4-H O-Rama in Conway on August 14th and 15th.



#### **Postoperative Brachial Plexus Palsy**

J. H. M. Kwaan and I. Rappaport (Dept of Surgery, Univ of California, Irvine 92664)  
*Arch Surg* 101:612-615 (Nov) 1970

In a correlative anatomical and clinical study to deline the contributing factor in postoperative brachial plexus palsy, tension recording along the brachial plexus was made on nine fresh cadavers by means of a spring gauge placed in series with the nerve plexus. Increasing nerve tension or stretch was observed with the arm in progressive abduction. In 39 patients affected by this neurological defect, as reported in the literature, hyperabduction of the arm was also noted in the majority of instances. Excessive nerve stretch is believed to be an important causal factor. Observations of brachial plexus tension with reference to various arm positions outlined in the study may serve as a guide in the prevention of this paralytic disability.



## NEW MEMBERS

### **Dr. William Frederick Blankenship**

Dr. William F. Blankenship, a native of Little Rock, has been accepted for membership in the Pulaski County Medical Society. Dr. Blankenship attended Louisiana State University, Baton Rouge, Louisiana, and the University of Arkansas at Fayetteville, receiving a B.S. degree from the latter. He was graduated from the University of Arkansas School of Medicine in 1964. After completing his internship at Ben Taub General Hospital, Houston, Texas, Dr. Blankenship returned to the University Medical Center for his residency work in Orthopedics, which he completed in 1971. From July 1971 to March 1972, he was in practice in Corpus Christi, Texas.

Dr. Blankenship is associated with Dr. Charles N. McKenzie in the practice of Orthopaedic Surgery at 802 North University, Little Rock.

### **Dr. Raymond Lawrence Marecek**

Dr. Raymond L. Marecek is a new member of the Pulaski County Medical Society. He is a native of Little Rock. He received his pre-medical education at Christian Brothers College, Memphis, Tennessee, and Hendrix College, Conway, Arkansas. In 1964, he was graduated from the University of Arkansas School of Medicine. His internship was completed at Ancker Hospital in St. Paul, Minnesota. His residency training in Internal Medicine was at the University of Arkansas Medical Center. He held a Fellowship in Endocrinology at Duke University in Durham, North Carolina, from 1970-72.

Dr. Marecek is associated with the Little Rock Diagnostic Clinic at 900 North University Avenue in Little Rock.

### **Dr. James E. McDonald, II**

Dr. James E. McDonald, II, is a new member of the Pulaski County Medical Society. Dr. McDonald was born in San Antonio, Texas. He received his B.S. degree from the University of

Arkansas at Fayetteville, and in 1969, he was graduated from the University of Arkansas School of Medicine. Dr. McDonald is presently a resident in Ophthalmology at the University Medical Center.

### **Dr. Joseph Sujai Udomsap**

Dr. J. Sujai Udomsap, a native of Bluket, Thailand, is a new member of the Pulaski County Medical Society. Dr. Udomsap received his pre-medical education at Chiengmai University, Chiengmai, Thailand. In 1965, he was graduated from the Faculty of Medicine at Chiengmai Hospital University of Medical Sciences. Dr. Udomsap is a Surgery resident at the University of Arkansas Medical Center.



### **Prophylactic Diuresis With Ethacrynic Acid for Prevention of Postoperative Renal Failure**

W. M. Stahl and A. M. Stone (Dept of Surgery, New York Univ Medical Center, New York 10016)

*Ann Surg* 172:361-369 (Sept) 1970

Changes in glomerular filtration rate (GFR) were measured pre- and postoperatively in patients undergoing routine abdominal and open heart surgical procedures. A test group of patients with low preoperative GFR who were to have abdominal procedures received an intraoperative infusion of ethacrynic acid and mannitol. Patients undergoing routine abdominal procedures had a decrease in GFR of 20% to 30% on the first postoperative day, with return to preoperative values over a four-day course. Patients having open heart surgery showed a similar 30% decrease in GFR on the first postoperative day. In this group the GFR returned to the preoperative level more rapidly and rose to 135% of the preoperative value by the third postoperative day. Patients receiving intraoperative ethacrynic acid had an immediate rise in GFR on the first postoperative day to 140% of the preoperative level, with return to normal by the fourth postoperative day. The difference in the postoperative pattern of GFR between the ethacrynic acid group and the control group was statistically significant.

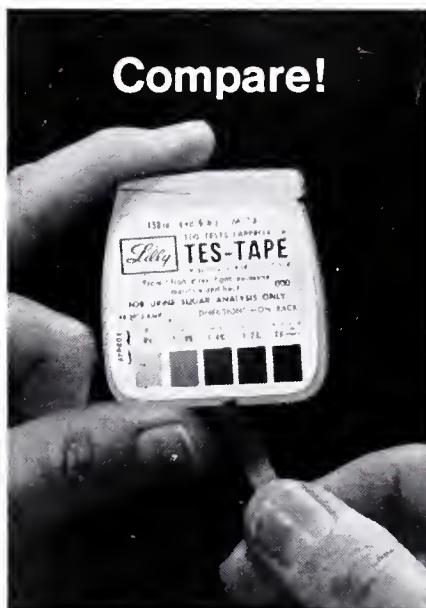
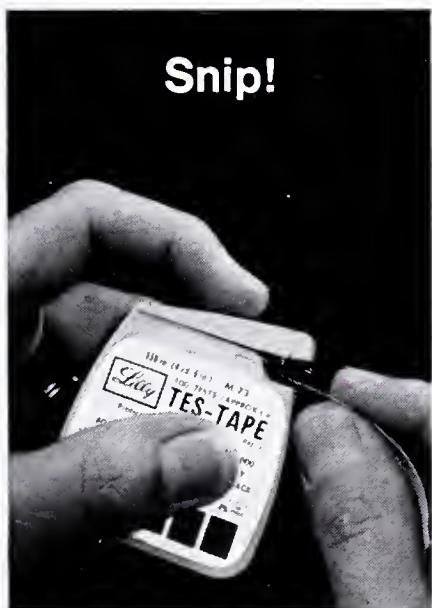
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Vol. 69 No. 4

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# The University of Arkansas School of Medicine

## Where It Has Been and Where It Is Going\*\*

Winston K. Shorey, M.D.\*

An individual's perspective of history is greatly influenced by where he is. Ancient history consists of all activities that occurred before his time, and significant history is a record of those activities in which he has participated. Nevertheless, it is helpful to occasionally review the trials and tribulations of our predecessors if only to recognize that institutions that are of service survive when reason dictates they should fail, that we are temporary custodians of an institution which has been in existence for nearly 100 years, and that our medical school, though frequently poverty stricken, has been dynamic, changing constantly to meet contemporary situations.

The late Dr. Carroll F. Shukers prepared a history of the medical school as part of a history of "The University of Arkansas" by Harrison Hale which was published in 1948, and I have drawn heavily from Dr. Shuker's writings.

The Medical school had its origin in 1879 when eight prominent Little Rock physicians formed a joint stock company to conduct and support a medical school for the state. In contrast with the founders of many proprietary medical schools of that era, these physicians appear to have been truly men of altruism and dedication. The State University was willing for the medical school to use its name, but with the stipulation that it would provide no financial support for its operation. It was called the Medical Department of the Arkansas Industrial Univer-

sity, and the diplomas were from the university. The cost of operating the school had to be met entirely from fees paid by students. The level of education was admittedly poor, consisting primarily of series of lectures with little or no laboratory or clinical experience.

In 1890 the medical school moved to a new building constructed specifically for it and paid for through subscription from the stockholders. This building was next to a hospital, and provision was made for patients to be taken to an amphitheater within the medical school for clinical demonstrations. Also in 1890 the medical school became a member of the Association of American Medical Colleges which was organized in that year.

In 1906 a second medical school, the College of Physicians and Surgeons, was established through the formation of another joint-stock company consisting of nineteen Little Rock physicians. It conducted its program in a manner similar to that of the one bearing the name of the University.

A major crisis occurred in 1910 with the publication of Abraham Flexner's report on Medical Education in the United States and Canada supported by the Carnegie Foundation. Flexner did not view the medical schools in Little Rock with the same degree of affection as did those who were struggling to keep them in operation. He described our medical school as an independent institution, not even affiliated with the state university whose name it bears; and pointed out that the total annual budget was \$14,100 collected as

\* Dean University of Arkansas School of Medicine, 4301 West Markham, Little Rock 72205.

\*\* AOA Lecture, presented May 26, 1972.

fees from students. He expressed extreme dissatisfaction with the facilities and program for teaching the basic sciences, and the following is quoted from his report regarding clinical facilities. "Hardly more than nominal. The School adjoins the City Hospital with a capacity of 30 beds. From this hospital patients are brought into the amphitheater of the school building. There are no ward visits. The students see no contagious diseases; obstetrical work is precarious; of post-mortems there is no mention. There is a small dispensary, of whose attendance no record is procurable." His comments regarding the College of Physicians and Surgeons were equally devastating. His concluding summary of the two schools included the following, "—; neither has a redeeming feature. It is incredible that the state university should permit its name to shelter one of them. The general educational interests of the state require that the state university, now inconveniently located in Fayetteville, should be moved to Little Rock. Once there, it could probably get possession of both schools and organize something better than either, which it could improve as its resources increase with the general prosperity of the state."

In the aftermath of Flexner's review of medical education, the American Medical Association took vigorous action; and most medical schools with reports as scathing as that submitted for the Little Rock schools were closed. In 1906 there were 162 medical schools in the United States, and in 1920 only 85 remained. The Arkansas Medical Society was instrumental in overcoming this crisis. The Society went on record stating, "That the day of unendowed, professor-owned medical schools was past." It appointed a committee that was charged to persuade the two existing medical schools to combine and deed their properties and equipment to the state; to persuade the General Assembly of the State to accept the properties and to make the combined school an integral part of the University and to provide for its adequate support; and to induce the state to build and maintain a charity hospital in connection with and under the control of the University School of Medicine. Two years after this committee went into action the schools were combined and deeded to the University, and a legislative act accepting the gift provided that the faith and credit of the state were pledged to forever maintain and operate a first-class medical

college as part of the University of Arkansas. All was not roses in putting these high sounding words into effect, but by 1913 the medical school became financed by the state with an annual budget of \$36,000. The old state capitol building was utilized by the pre-clinical departments, and these were staffed with full time faculty members.

The next major crisis occurred in 1918 when the medical school found itself unable to maintain a grade A rating because of inadequate facilities for clinical teaching. A dedication to excellence was demonstrated by the school's decision to discontinue clinical teaching rather than accept a class B accreditation rating, and until 1920 ours was a two-year medical school.

The effort to obtain adequate clinical facilities was taken to the state legislature, and an appropriation of \$500,000 was secured to construct a state university charity hospital. Unfortunately, the state penitentiary found itself in debt; and the medical school found itself without its half million dollars. The need for clinical facilities of that era was solved by making available to the medical school the 200 bed City Hospital.

Expansion of its programs during the 1920's produced the ever recurring medical school problem, inadequate space. This was resolved through the construction of a new medical school building on McAlmont Street which was accomplished during the height of the great depression through use of federal WPA funds.

Another accreditation crisis developed in 1938 when the medical school was placed on probation. Again the problem was inadequate facilities and program for clinical teaching. This was overcome by instituting a supervised system of extern training in hospitals throughout the state and by reducing the amount of didactic instruction in clinical medicine to permit students more time for actual study of patients. Probation was removed in 1944.

For a few people present we have just moved from ancient history to recent history, although I personally am too young to be included in that group.

Although constantly deficient in adequate financial support, the medical school continued to develop and to respond to changing times. An increasing number of full time faculty were appointed to the clinical departments as well as in the basic sciences; and some fifteen to twenty

years after they were constructed, the facilities on McAhmont Street were quite inadequate.

The people of Arkansas responded through the construction of the University of Arkansas Medical Center. Much could be said regarding the negotiations, planning, legislative action and individual contributions that resulted in the construction of our current facilities. Stated briefly; land was provided by the Arkansas State Hospital, state funds were obtained through a 2 cent tax on cigarettes, a relatively small amount of federal Hill-Burton funds were obtained for the hospital, bonds were floated for the residence hall, and private philanthropy together with federal research facilities funds provided the T. H. Barton Research Building. The new facilities were occupied in 1956, and this event is the most logical benchmark for the beginning of the medical school's recent history.

It is hazardous for one who has been part of a segment of an institution's history to ascribe any particular significance to that segment. However, I believe that in the future the period that has transpired between the move to the Medical Center and the present will be looked back upon as a more or less identifiable era in the medical school's existence. If I am correct, it will be characterized as a period when the total energy of the school was directed toward developing the operational program of a modern medical school. The primary concern has been recruiting the people, and generating the resources to support them, essential for the provision of accreditable programs for the education of medical students and graduate students; and the training of interns and residents. This has involved a continuing effort to increase our state support, the obtaining of funds from federal and other agencies, fostering a research program essential for the recruitment and retention of capable faculty members, and a continuing program in space renovation to accommodate additional faculty members within the limited accommodations of the Medical Center. These activities have occurred while conducting the on-going educational programs and all that is entailed in the admission, education, and graduation of students; review and revision of curriculum; and the rendering of professional services to patients within the University Hospital. What has been accomplished is the result of a total faculty effort, not only with respect to carrying out the on-going

programs, but also in the generation of funds to support the programs. Fifty-five per cent of the current personnel budget of the School of Medicine is provided from grants and other sources outside the general fund of the institution. The majority of these funds are generated through the initiative and energy of the faculty itself.

What have these efforts accomplished toward providing the faculty necessary for a top-flight educational program? During the past decade the number of full time faculty has increased from 88 to 190, a number still too low for the size of our program and the additional students who will be enrolled. Special comment needs to be made regarding the major contribution of the Little Rock Veterans Administration Hospital in providing not only a large faculty for clinical teaching, but also 40 of the existing 190 full time faculty members. The Arkansas Children's Hospital also is providing a major clinical teaching facility and full time faculty positions.

Let us turn now to specific accomplishments of the School of Medicine as they relate to the outside world and to the impact that the school has had upon the State of Arkansas.

There has been a steady increase in medical student enrollment, and this coming fall the number of first year students will increase by 10 per cent to 121. Much more important than the number of students admitted is the number graduated. I doubt if there is any medical school in the country that can match ours in increasing physician production through decreasing the loss of admitted students. During the past decade the attrition rate has been reduced from about 20 per cent to about 5 per cent. In 1930 the medical school graduated 29 physicians; in 1940, 63; in 1950, 69; in 1960, 86; and last year there were 104. This June there will be 96, and thereafter the number will be consistently over 100 until 1976 when it will increase to about 115.

The dependence of Arkansas upon its medical school for supplying the physicians it requires has steadily increased. Between 1950 and 1969 there was little change in the actual number of physicians in active practice within the state. However, in 1950 thirty-eight per cent of the actively practicing physicians in Arkansas were graduates of our School of Medicine, and in 1969 this had increased to 62 per cent. Concurrent with the shift from other medical schools to the University of Arkansas School of Medicine as the

primary provider of physicians for Arkansas, the practicing medical profession has become more youthful. In 1950 physicians under the age of 66 comprised 66 per cent of the total number in practice. In 1969 this had increased to 90 per cent.

We frequently are confronted with the allegation that the number of our graduates who go to other states to practice is high. The truth is that the record of our graduates for establishing practice within the state is unusually good. As nearly as we can determine, about 60 per cent of our graduates establish their practices within the state. This compares with a national average of about 40 per cent for all medical schools and 50 per cent for publicly supported medical schools. I believe confusion exists as a result of lack of information, and at times not wanting to hear, regarding the activities of newly graduated physicians. It may surprise even those familiar with medical education to know that seven years elapse between graduation of a class of medical students and the time when a majority of that class is settled in practice. There are not enough intern or other first year post-graduate training positions within Arkansas to accommodate half of a graduating class. Many students, having acquired their entire previous education in Arkansas, desire to pursue their post-graduate training in some other part of the country. Stipends paid to interns and residents in hospitals elsewhere are generally higher than those paid here. The majority of graduates, regardless of where they take their post-graduate training, are obligated to spend a minimum of two years with the armed forces. The departure of a large number of graduates, all leaving at the same time, to their internships in other states arouses concern and comment. Little notice is taken as they return to Arkansas individually over succeeding years.

Another question that I am asked frequently is, "How many of our graduates are entering general or family practice?" This is a difficult question to answer precisely in the present because of the long lag period between graduation and establishing practice. Our records indicate that approximately 24 per cent of our graduates have been entering family practice. Another 16 per cent provide primary medical care within the specialty of internal medicine and another 7 per cent become pediatricians. The rest are

spread through all the specialties with general surgery heading the list with about 9 per cent.

Rarely am I asked about the quality of the physicians we are graduating. I like to believe this reflects confidence in our educational program rather than lack of interest. People ask questions about the problem issues that disturb them, not about matters that are going smoothly. While the question of quality of our graduates is rarely raised, comments and reports regarding their capability and knowledge as physicians come to us in various ways; and these are universally very favorable. Perhaps the most significant reports come from the graduates themselves who frequently are surprised to discover during their internships and residencies that their background equals and frequently surpasses that of colleagues from other medical schools. Our graduates are aggressively recruited as interns by many hospitals where previous graduates have established excellent reputations for themselves and for our medical school. Since the implementation of our elective senior year with opportunity for our students to elect portions of their program in other medical schools, we are accumulating a growing file of reports which document a high regard for our students by faculties of other medical schools.

Without question, this medical school is doing very well in producing an increasing number of physicians who are well educated and well trained for delivering quality medical services. There are still deficiencies and inadequacies which must, and will, be remedied. Remedial action includes additional faculty strength to many existing academic units and the creation of units which do not now exist. Utilizing resources of the Veterans Administration Hospital, together with some of our own, it now appears certain that two areas of deficiency will soon be taken care of. Specifically, there soon will be a new Division of Rehabilitative Medicine and also a Division of Gerontology. We are all aware of major deficiencies existent within the facilities of this Medical Center that must be corrected if we are to maintain the level of education which we already have achieved, to say nothing of further advancement in either quality or size of our program. Steps are being taken to correct these deficiencies, and I believe we can have confidence that corrective action will occur.

So far this presentation has been a description of growth, development, and achievement in providing quality medical education and training as measured by the standards which academic medicine has set for itself, these standards being derived from intimate knowledge of what constitutes high level patient care. This would be an excellent place for an AOA lecture, everything scholarly and academic appears to be in reasonably acceptable condition, and the future should be merely an extension and further improvement of on-going activities. This will characterize many aspects of the years ahead, and for some the next ten years will be similar to the past ten. However, for most members of the faculty and for the medical school as an institution, I believe the years ahead will be quite different from those of the past decade. The changes hopefully will be evolutionary rather than revolutionary, and these will be in response to many pressures brought to bear upon us. This sounds uncomfortable, but if we look at ourselves and our activities critically, practically everything we do is in response to pressures. If the pressure is one that we like, such as the invitation to participate in a project that dovetails with what we already are doing, we think of it as an opportunity. If it is one that is not in harmony with our on-going activities, it is apt to be considered a problem. The viability and strength of an institution such as ours, heavily dependent for its support upon sources outside of itself, rest in large part upon the manner in which it responds to pressures, whether these appear as opportunities or as problems. The "where we are going" part of this lecture, therefore, consists of a series of comments about problems and opportunities which I believe will consume a great deal of the medical school's energy in the coming years, and our responses to these will be the switches in the track that determine the direction the medical school takes and its character and stature in future years.

New problems are being tossed to medical education in addition to those with which we are constantly confronted in attempting to maintain quality programs. These problems are arising because individuals and groups of individuals outside of academic medicine also are measuring our efforts and accomplishments. To complicate matters, when others measure us and the products of our program, the standards used are not

the same as those to which we are accustomed. We find the effectiveness of our educational programs being measured in terms of availability of physicians' services, distribution of physicians, numbers of physicians involved in primary health care, total numbers of physicians in practice, local accessibility to medical care, and costs of medical care. Our conditioned response is that it is both unfair and unrealistic for these issues to be used as measures of the effectiveness of our efforts. We have limited time and limited resources with which to provide students and houseofficers the best education and training possible. We are accustomed to viewing our students and trainees as free agents who should have the opportunity to progress as far as their desires and capabilities dictate in obtaining an education and post-graduate training, and our responsibility rests in providing this for them.

There are at least two compelling reasons for us to evaluate our activities in academic medicine in relationship to the quality and quantity of medical services being delivered within our area of concern, which is the State of Arkansas. The first is that the problems in health care delivery are real, and if our programs in medical education can be revised to assist in solving them without decreasing quality, we have a responsibility to do so. The second reason is much more pragmatic, but nevertheless a reality of life. Adequate support for medical education is dependent upon confidence on the part of those providing economic assistance that the ultimate results are satisfactory to them. Currently, there is unhappiness among many people who, through both their state legislatures and the federal congress, provide the core support for medical education.

All medical schools are experiencing a great deal of pressure through the mechanism of financial support to correct deficiencies in health delivery as these are viewed by the public and by their legislative representatives. Funds to support medical education are being appropriated, but with stipulations as to what a medical school must do in order to receive these funds. The two major areas of stipulation are general increases in the number of medical students educated and increased emphasis upon programs to provide primary physicians.

The current effort to greatly increase the number of physicians produced in this country appears reasonable in view of statistical evidence

of a physician shortage and the general reaction of the public that physician services are in short supply. However, an attempt to produce a larger quantity of physicians beyond adequate teaching resources cannot help but reduce quality of education. Furthermore, there seems to be little, if any, concern regarding the potential for over-producing physicians. When one considers the long lag period between graduation from medical school and the establishment of practice, a large future physician manpower pool exists in the pipeline regarding which the public at large is unaware. For instance, the people of Arkansas as yet have not felt the impact of the much larger number of graduates which we have produced in the past few years. I do not really think we have reached the point of over-production, but the fact is that we really do not know. More precise information regarding future physician requirements is essential, and we in medical education must become more involved in determining these requirements. Such determinations must take into consideration how and under what circumstances physicians will practice in the future rather than being entirely the result of analyses of physician-population ratios.

The drive to increase physician production stems primarily from the need for more doctors to deliver primary health care, which in the eyes of most people means more family or general physicians. Increasing production by itself will not necessarily achieve that objective. A medical school can find itself forced to take more medical students than it can accommodate with quality and the needs of the public still not satisfied. Inequitable distribution of physicians and shortages in particular categories of practitioners remain potential problems even though the total number of physicians in practice increases. It is not sound economics, it is wasteful of faculty time and effort, and it will be productive of additional frustrations if increased production does not substantially resolve the fundamental problems. I believe it is incumbent upon us to become more familiar with the specific physician needs of our community, the State of Arkansas, and to review our total program in medical education and training to determine what revisions, additions, or other measures can be implemented to assure that our efforts have maximal effectiveness in providing quality medical services to all the people in the state.

The emphasis that is being placed upon producing primary physicians, particularly the development of family practice programs, is disquieting to many who feel that this is not an appropriate route to providing quality medical care for all people. There appears to be some difficulty in differentiating the projected family practitioner of the future from the individualist of the past. It is not my purpose this afternoon to defend the criteria that have been established for the training of family physicians and their certification. However, I believe it should be pointed out that the objective is not to produce a breed of physicians who attempt all fields of medicine from lung resection to the common cold. Emphasis is placed upon ambulatory medical services, routine care, and the continuing supervision of the health of families. It came into being because (1) a year of internship is insufficient training for any type of practice, (2) to provide a recognizable entity for the individual who engages in providing primary medical care. I believe our own family practice program has made a very good beginning in orienting students toward the field of primary medical care and in training residents. It has received substantial support from the other clinical departments. A great deal remains to be accomplished in weaving together the concepts of family medicine and the expertise to be derived from the various specialty departments.

We should look at family medicine as a way of life rather than a discipline. The training program of each future family physician will vary contingent upon the circumstances under which he will practice. The quality of his services should be measured in terms of excellence of those services that he personally renders, expert judgment in determining the directions his patients should take for specific clinical problems, and recognition of his own limitations. His professional satisfaction should be derived from well treated patients, whoever provides definitive therapy.

It is characteristic of humans to engage in over-emphasis to make a point. A degree of this exists in the demands being made of medical schools to produce more primary physicians. I am sure that if we stopped the training of other specialists and devoted our entire effort to producing generalists, we would be subject to pressures to produce more specialists. Our clinical chairmen

receive a continuing flow of requests from throughout the state seeking the specialists who are being trained in their residency programs. Furthermore, requests for specialists are coming from smaller communities as well as the larger ones.

A rational approach to problems in health delivery requires that the significance of all categories of physicians be recognized, and all people who require medical services must be considered. This includes those who are receiving adequate services as well as those who are not. People requiring highly specialized services must receive them as well as those requiring more general services. Generalists must not lose sight of the fact that their capability and knowledge in modern medicine by and large is the result of specialization of medicine, for it is the specialists, particularly those on medical school faculties, who have developed the knowledge and tools of modern medicine. At the same time, the specialists on medical school faculties will be expected to increase the portion of their training effort devoted to future family physicians, possibly developing special programs for them apart from their regular training programs. The potential for real innovation exists. What would be wrong with training a physician in obstetrics, but not gynecological surgery, and in pediatrics? What makes delivery the appropriate time for the children's physician to establish his relationship with mothers and to assume responsibility for growth and development? Such a physician probably would not be certified by any American Board is one answer. So what, if he is a well trained and capable physician.

It is said that American Boards came into existence because universities defaulted in accepting responsibility for physician education and training beyond the M.D. degree. Possibly the university now should take back some of this responsibility, particularly if there is need and opportunity for the services of a physician trained outside the specific requirements of an American Board.

No one questions the need for more physicians in Arkansas. However, coming to grips with the specifics of these needs and determining how they can best be met is a much more difficult problem. Certain parts of the state are doing reasonably well in attracting physicians, partic-

ularly the northern and northwestern portions of the state. Other areas, particularly the southeastern portion, are destitute for physicians. Central Arkansas has a large total number of doctors, yet problems exist in availability of primary medical care. In general, it can be said that ours is a problem of providing physician services in rural areas, and I believe a special comment is indicated. We hear statements at the national level that the greatest needs for additional medical manpower are in the ghetto areas of cities and rural areas throughout the country. While this is a true statement, it has the potential for an erroneous implication. One can gain the impression that the basis of the problem of medical manpower shortage in each of the two areas is the same, namely, poverty. My observations tell me that this is not so, particularly in Arkansas. I recognize that this comment appears to conflict with per capita income statistics and general impressions that are prevalent regarding the state. To be sure, there are poor people in the rural areas as there are poor people in the urban areas. Nevertheless, there are sufficient economic resources in the smaller communities throughout the state to support physicians. Physicians abandon practices in smaller communities not because of inadequate incomes, but because of overwork, cultural and social problems, and isolation.

The facilities of medical schools are committed to providing high quality scientifically oriented care for their patients and to teaching students to do likewise. At the same time, it frequently appears that many people could care less about existence of quality care providing there is someone around whom they can call doctor. People are aware that there is something called quality medical care, but universal appreciation for what is entailed in its totality from primary care up through the most sophisticated aspects of specialized medicine is limited. People think in terms of proximity of doctors and visible action by physicians rather than of the availability of well trained professionals with capability for providing considered medical judgments and who get into action only when guided by decision derived from scientific evaluation of clinical situations. The provision of quality medical services for all people requires a major effort to inform the public as to what quality medical services are and the conditions under which they can best be provided.

In the past an attractive location for a young physician was an area where he could stake out a claim and, much like the cardinal, achieve security through independence; protecting that independence by activity and competence which deterred other colleagues from settling in his locality. Young physicians of today are much more like the purple martins; and areas desiring to attract that elusive species, Medicinae Doctor, should be thinking in terms of building martin houses rather than hoping for individual nests to appear spontaneously. Furthermore, a martin house located in the wrong place does not attract martins. It must be in the open where the more adventuresome early arrivals can see it and judge it to be suitably located, both for the daily work that martins do and for raising their young.

The security in numbers which is sought by today's young physicians derives both from the impact of their scientific medical training and from their desire to stay alive and achieve a degree of social happiness. Physicians achieved security in independent practice when professional judgment was based upon an accumulation of information and experience within the brain to be brought forth, sometimes almost intuitively, when confronted with clinical problems. This approach to medicine followed a medical school experience in which the diagnosis was what the professor said it was, and the objective of a student was to arrive at a conclusion that would be in agreement with the professor when he made rounds. The scientific information available regarding a clinical problem today and the need to evaluate the significance of the various bits of this information leaves the independent practitioner in an uncomfortable situation. He wants someone with whom he can discuss complicated clinical problems. The pace that has been set for today's medical practitioner requires periodic relief from professional activities, and this can only be obtained if colleagues are available to assume one's responsibilities during periods of relaxation. Dr. Shukers commented in his history of the medical school that at one time the curriculum included a course in botany. This was not only because plants possessed medical value, but, "to the country practitioner, it is a very useful and essential qualification, affording him pleasure in the examination of flowers and plants while on his lonely rides to and from his patients." This certainly reflects a pace of

activity quite different from that of today's physician.

Reconciliation between the desires of small communities for a doctor and the reality that future physicians are going to practice in groups, whether generalists or specialists, requires study, planning, acceptance of responsibility by physicians in larger communities for care of people in smaller ones, and understanding by people in small communities as to how their needs can best be met.

Some of the comments I have made may seem beyond the realm of the responsibilities of a medical school. I think not, and as time goes on I believe we will be more and more involved with these issues. Furthermore, resources heretofore unavailable now are in existence to assist in solving the problems. The Arkansas Regional Medical Program is a child of the Medical School, and it has evolved into a strong organization standing on its own. Through its efforts, major achievements have been made in improving the care of patients with acute coronary heart disease, and now a state-wide program developed to provide services for patients with chronic kidney disease is being implemented and already has made significant progress. In addition to these and many other tangible achievements, ARMP has made a great contribution serving as a catalyst to bring groups of professionals together to solve problems and to work for common goals. The Arkansas Comprehensive Health Planning Program has worked closely with the Arkansas Regional Medical Program, and their combined efforts have been effective. The most significant achievement in their collaboration has been the securing of funds from HEW to establish the Arkansas Health Systems Foundation. This was one of only two awards in the nation that designated an entire state as a community in which to plan for and establish experimental health delivery systems. This new program is adding its efforts to those of the other two. Two additional accomplishments have been made. Funds have been obtained to establish the Arkansas Health Statistics Center which will operate out of the Department of Administration of the Governor's Office. This will bring together the various fragmented efforts that now exist to compile significant health statistics and will provide capability for gathering additional needed information. The other accomplishment

still is in the potential state, but an application to plan for state-wide emergency services has received favorable preliminary consideration and a site visit for this project will occur in the very near future. Individual faculty members of the School of Medicine have been involved in all of these developments.

The School of Medicine now can utilize the resources of these various planning and development groups to more effectively plan and conduct its educational programs. Capability exists for obtaining significant information regarding the health needs of the state and how best these needs can be met. We have the opportunity to develop a goal oriented program both from the viewpoint of the institution and from the viewpoint of individual students. As more and more information becomes available this can be transmitted to both faculty and students to assist in guiding our educational programs and in student career elections.

Through increased systemization in planning for health delivery, regional centers can be delineated where groups of physicians can most effectively serve the surrounding areas. With information available regarding the numbers and types of physicians that can best serve in such a regional center, interested students and house-officers can prepare themselves to serve those needs. Carrying the concept even further, it is not out of the realm of possibility to educate and train a group of young physicians which as an entity might leave the Medical Center with a slogan, "Have Group—Will Settle."

In order to educate and train additional physicians and also to expose our students and trainees to medical practice in various parts of the state, this School of Medicine will be extending its educational programs into hospitals and other health facilities beyond the Medical Center and beyond Little Rock. This already is occurring within the community hospitals of Little Rock. By 1975 we can look forward to a city-wide houseofficer program. This not only is a desirable development, it is an essential one. After 1975, hospital internships will not be approved unless they are affiliated with programs providing for training beyond the internship. The Arkansas Regional Medical Program is in the process of developing community manpower centers in five locations throughout the state. These should provide excellent opportunities for

extension of our educational programs. The Department of Medicine already is in the process of extending its program into such a proposed center in El Dorado. Extensions of programs into other facilities entails the establishment of full time faculty personnel in these facilities. As faculty become located in these facilities and houseofficer programs develop, students will follow; and the educational programs of our School of Medicine will be scattered throughout the whole state. This will be beneficial not only to the education and training of students and house-officers, but should result in a more equitable distribution of medical manpower throughout the state. Furthermore, the existence of educational and training programs in other communities will enhance the quality of services provided to the people of those communities and the surrounding communities.

What happens back here at the ranch with the extension of our educational and training programs into other facilities within the state? Extension of programs can only occur from a strong base, and this is an essential which will be well recognized by those facilities into which our programs are extended. Rather than being an institution conducting its programs in relative isolation, the School of Medicine will become an institution drawing support from all of its affiliates. Their welfare will depend upon ours, and they will look to us for expertise and professional support.

The eventual development will be a system in medical education with the School of Medicine serving as the nucleus. Basic science teaching, the teaching of the fundamentals of scientific medicine, research, training of specialists, refresher programs for practicing physicians, and the rendering of complicated and sophisticated patient care services will be among central activities; and there will, of course, be others.

The significance of research at a time when problems in health delivery seem to be dominating thought is a matter of concern to many academicians. The future of medicine depends upon research, and opportunity for investigators to pursue their interests will increase rather than decrease. Research has suffered an economic set back during the past few years because of its dependence upon federal funds and shifts in federal dollars from research agencies to medical education and patient care agencies. Support of

research will be more realistic in the future than in the past. Prior to the availability of funds to support medical education directly, research funds were being utilized by many medical schools as a major source of support. Support of medical education from funds appropriated for research was a diversion of money, and it also placed unhealthy stresses upon medical schools. Research funds already are more plentiful than they were, and this has been reflected in grants received by our faculty in the past two months. As to the future, increased knowledge and understanding of scientific medicine by people throughout the state and improved mechanisms for providing high level medical services to all people can only lead to increased interest in the search for new knowledge.

Unique opportunities for research and collaborative scientific endeavor already have occurred and will increase through the University's

association with the National Center for Toxicological Research in Pine Bluff.

In addition to the faculty being highly involved in fundamental biomedical and clinical research, it also will become more and more involved in the exploration of improved ways to provide patient care. An existing example of this is the program of the Department of Pediatrics for training nurses to become physicians' associates. While Dr. Merrill knew precisely what he was doing when he implemented this program, from the institutional point of view it constitutes research in health delivery.

In conclusion, it is incumbent upon me to state that I cannot predict where the medical school is going. I have only pointed out a portion of the ball park in which the game probably will be played. When it becomes a matter of specifics it will be the faculty and the students who determine the school's future.



#### **Membranoproliferative Glomerulonephritis and Persistent Hypocomplementemia**

J. S. Cameron et al (Inglemere Rd, Foresthill, London)

*Brit Med J* 4:7-13 (Oct 3) 1970

Fifty patients with membranoproliferative glomerulonephritis have been studied by renal biopsy, serial C'3 complement levels, renal function studies, and clinical aspects for 1 to 8½ years. The specific lesion is a combination of mesangial proliferation and capillary wall thickening. The walls are thickened in several ways, including subendothelial deposits. The plasma C'3 levels are persistently depressed in most patients. 68% showing initial lowering and 85% developing persistent hypocomplementemia at some time during their disease. The hypocomplementemia persisted after anuria and even nephrectomy. Treatment with steroids, azathioprine plus steroids, and cyclophosphamide did not appear to influence the course of the disease, which was slowly progressive with long periods of little change in half of the patients. Hypertension was a feature of the advanced lesion. Presentation was with both hematuria and proteinuria in all instances, ie, a "mixed" nephritic-nephrotic pattern.

#### **Levitation in Treatment of Large-Area Burns**

R. Sanders, J. T. Scales (Royal National Orthopedic Hosp, Stanmore, Middlesex, England) and I. F. K. Muir

*Lancet* 2:677-680 (Oct 3) 1970

The treatment of seven patients with severe burns by levitation on a hoverbed, using humidified, warm and sterile air is described. Burns of any extent, distribution, or thickness may be simultaneously and completely dried at a greater rate than by any other available method. Nursing is simplified and fewer nurses are required in the acute phase of treatment. Burn wounds did not become clinically infected until separation of the eschar and then healed quickly with excellent survival of the grafts. Follow-up showed scarring to be normal, pain was relieved, there was no vomiting, and sleep was normal. Free movement and careful positioning of the patient is possible without lifting and treatment of pressure areas is made unnecessary. Body temperature can be controlled. The burn is exposed to air but not to view. The levitation equipment has been proved safe, and noise is reduced to acceptable levels. The "microclimate" permits conditions which are ideal for patients and attendants.

# Prescribing Supplemental Fluorine in Fluoride Deficient Water Supplies

Lawrence D. Furlong, D.D.S., M.P.H.\*

The medical and dental professions today are placing the total health of their patients as the goal in modern practice. The awareness of the medical profession to preventive disease has included the importance of the fluoride ion in the growth and development of youth of today.

This awareness is heartening, as the two professions join forces on the most prevalent disease of mankind.

Years of research have shown the benefits of fluorides in water supplies. The optimal one part per million of fluoride in the community's drinking supply has drastically reduced the caries rate as shown in surveys and data accumulated. The percentage of reduction has been between 45% to 65% in communities throughout the nation.

However, a large percentage of the population is without this beneficial research finding.

Two reasons are foremost as to its failure to reach the whole population. First, communities have been unaware of its benefits or have not moved forward to accept its preventive measures. Secondly, because of the lack of community water supplies, a great segment of the population must depend on a single private water supply. In the latter instance, the fluoridation of the supply, though feasible, is not a practical financial approach. The only avenue of benefits to the preventative activity of the fluorides is through the topical application of the ion by their family dentist or the inclusion of the fluoride by the dentist or physician in a supplemental manner.

Today, many supplemental preparations are being prepared and prescribed in lieu of the presence of the optimal content of fluorides in the drinking water or food intake. The preparations are being developed in tablet form for inclusion in drinking water, milk, and chewing gum, as well as infant feedings.

Physicians and dentists should not be hesitant to use these beneficial adjuncts under conditions where the ideal source of one part per million of the fluoride ion is absent. However, a conscientious approach can sometimes be diverted through an oversight.

Most water supplies contain some degree of the fluoride ion. In Arkansas, this percentage varies from 0 to 5.9 parts per million. In the areas of the state where the content of the fluoride ion is above the optimum of one part per million, the water supplies have been blended to reduce the marginal mottling of teeth which may occur in water supplies with this high water content of the ion. The Bureau of Environmental Engineering and the Bureau of Dental Health are always alerted to these findings in water sample tests.

Today throughout the State of Arkansas, 120 cities and communities are enjoying the benefits of fluorides in their community water supplies. These supplies serve a population of 890,000 individuals; a great step forward in the prevention of the ravages of dental disease.

A guide-line can be followed by the physicians and dentists interested in supplementing the intake of the fluoride in the drinking water supply or dietary intake. The program recommended by Trubman<sup>1</sup> is most applicable.

I. Determine the present fluoride percentage of the water supply now being consumed. (This information in most instances can be obtained from the Bureau of Environmental Engineering or the Bureau of Dental Health. In instances of a private water supply, a sample may be sent in for analysis to the above state agencies.)

II. The effectiveness of supplemental fluorine is confined usually to children under the age of 12 years. For best results, fluorine administration should begin as early as possible in the life of the child.

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III. No tablets or dietary supplement should be prescribed when the amount of fluorine in water exceeds .77 parts per million.

IV. Children two to three years old should receive 0.5 mg. of the fluoride ion daily and about 1.0 mg. daily after the age of three. This dosage applies when the drinking water is free of fluorine.

V. For each 0.1 p.p.m. of fluorine in the drinking water, the prescription dosage should be reduced ten (10%) percent. Not more than 264 mg. (120 mg. fluorine) should be dispensed at one time.

VI. Parents should be advised to store fluorine preparations out of the reach of children.

VII. Parents should also be instructed not to double the dosage if a daily supplement has been missed.

The chances of over-prescribing is minimal if sensible observations are carried out. The range

of 1 to 2 parts per million is not a critical area of concern in enamel fluorosis of the teeth. The author,<sup>2</sup> in observing the teeth of children for twenty-five years in natural fluoride areas within the range of 1 to 2 parts per million, was unable to find any degree of mottling or aesthetical defacing of the teeth of these youngsters.

The ideal in the process of dental research will come to future generations when all will have the benefits of fluorides of optimal content in communal water supplies. Since this is not possible today, the medical and dental professions should use the approach at hand for those who have no choice.

#### REFERENCES

1. Frubman, Aaron. Fluorides and the Physician. Miss. Med. Assoc. Jour. 2:438-40, September, 1961.
2. Furlong, L. D. Incidences of Fluorosis: A twenty-five year observation of children born in communities of 1.0 to 2.0 p.p.m. of fluorides in water supplies. Former Director, Dental Division, Health Department, Joliet, Illinois. Unpublished.



#### Hypersensitivity Pneumonitis Due to Contamination of Air-Conditioner

E. F. Banaszak, W. H. Thiede, and J. N. Fink  
(Marquette Univ School of Medicine, Milwaukee)

*New Eng J Med* 283:271-276 (Aug 6) 1970

Four of 27 office workers developed symptoms of intermittent chills, fever, and dyspnea, or progressive dyspnea alone. Pulmonary function studies indicated restrictive and diffusion defects and x-ray examination demonstrated diffuse nodular infiltrates in all four patients. Examination of their environment revealed contamination of the air conditioning system with a thermophilic actinomycete known to cause a hypersensitivity pneumonitis such as farmer's lung. Sera of all affected individuals contained high titers of rheumatoid factor and precipitating antibodies against the offending organism. Insufflation of one of the ill workers during an asymptomatic period reproduced all clinical features of the disorder. Treatment with steroids and avoidance of exposure resulted in recovery.

#### Thyroid and Gastric Autoimmunity in Patients With Diabetes Mellitus

W. J. Irvine et al (Royal Infirmary, Edinburgh)  
*Lancet* 2:163-168 (July 25) 1970

The incidence of antibodies to thyroid cytoplasm and to gastric parietal cell cytoplasm was found to be significantly increased ( $P < 0.001$ ) in the sera of 1,054 diabetics without clinical thyroid disease or pernicious anemia, compared to 871 control subjects, when analyzed by age and sex. The increased incidence of these antibodies was particularly pronounced in young insulin-dependent diabetics, especially young women. Within the insulin-dependent group there was no correlation with the age of onset of diabetes. The incidence of antibody to thyroglobulin in the diabetics compared to controls was much less pronounced than was the incidence of antibody to thyroid cytoplasm and to gastric parietal cell cytoplasm. There seems to be a disorder of the immunological system related to insulin-dependent diabetes with respect to the formation of autoantibodies.

# Care of the Elderly Cardiac in the British Isles\*

Ferguson Anderson, O.B.E., M.D., F.R.C.P., and David Cargill\*\*

As in other developed countries Great Britain has had its share of heart disease, and this is extremely common in my home country, Scotland, where the proportion of deaths due to heart disease comes out at over one-third of all deaths. If the Registrar General's figures for Scotland are examined further then there is a lack of percentage increase in heart disease with advancing age and in the older age groups there is little sex difference in the proportion of deaths due to heart disease. Death rates from heart disease approximately double in men and treble in women for every ten years of life over the age of 45, and this is mainly due to ischaemic heart disease. With increased age there is also a steep rise in cardiac deaths of uncertain diagnosis—for example, myocardial insufficiency and congestive heart failure without stated cause.

## Heart Disease in Old People

Kennedy and his colleagues (1972) in Glasgow found that 40% of randomly selected elderly people, 65 years and over, living at home, had definite evidence of heart disease and this rose to 50% when the individuals examined were over 75 years. Apart from death, heart disease acts as a factor in limiting the success of rehabilitation following illness; for example, a stroke in elderly people as it renders walking more difficult and dangerous because of the development of angina pectoris or heart failure.

In common with many other illnesses in older people the symptoms are modified by several factors; perhaps the most important is the frequency with which multiple pathology occurs in the elderly, thus one symptom may have many possible causes. Ankle oedema may be due to lack of movement of a limb or to chronic venous insufficiency and it is certainly more likely to be due to congestive heart failure when bilateral. Helfant and Ptashkin (1969), however, discovered a man aged 72 years with right hemioedema due to the fact that he lay always on his right side and he was successfully treated with digitalis

and diuretics. Breathlessness may be caused by lung disease, anaemia or gross obesity. These different illnesses may be present in the same person and the existence of one disease is no protection, almost the reverse, from another.

Symptoms in the elderly tend to be insidious and slow in developing so that the patient with severe Addisonian pernicious anaemia may present as a case of cardiac failure with breathlessness and oedema of ankles. The clinical picture may be altered as it is thought by many that the physiological control of posture, the sensations of thirst and of pain and temperature regulation may be upset in old people and thus it is extremely easy to overlook a serious illness. Confirming the work of Rodstein (1956), Pathy (1967), in a clinical study of myocardial infarction in 387 patients aged 65 years and over noted that only 19% of the total had a classical onset with substernal or epigastric pain. In 81% the mode of presentation could be divided in fourteen other groups with symptoms of dyspnoea, confusion, dizziness, palpitation, recurrent vomiting, weakness, breathlessness or sweating or with syncope, peripheral gangrene, renal failure, stroke, pulmonary embolism or sudden death.

The presence of other diseases may in fact prevent the development of cardiac failure, for example osteoarthritis of hips and knees or myxoedema, in that the patient may not move enough to uncover the deficiency of the circulation. When an elderly patient with Parkinsonism is given levodopa heart failure may be precipitated by the development of frank cardiac failure (Broe and Caird, 1972).

Mental confusion may complicate the clinical picture and render accurate history-taking impossible, while forgetfulness may mean that leading symptoms are not mentioned. Apathy is a symptom common among older people which renders the doctor's task almost impossible; on questioning, the individual of 80 years or above may complain of tiredness and weakness, fatigue and general exhaustion. These general symptoms may indicate a great many different illnesses; the patient may have had a coronary thrombosis and if these symptoms have come on suddenly then

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thought should be given to that diagnosis. On the other hand, the old person may have neoplasm, a silent pneumonia or potassium deficiency.

In the care of older people in the British Isles, great stress is now laid on trying to uncover illness in old people who have not contacted a doctor as they confuse the symptoms of disease with those due to aging. Williamson's work in Edinburgh (1966) revealed that when elderly people knew they were ill they would almost certainly seek their doctor's advice but on many occasions the older person did not understand that the symptoms present were due to disease. In a random sample of one in five people 65 years and over, in Kilsyth, a small town near Glasgow, the incidence of morbidity was found to increase greatly at 70 years of age and cardiac failure, sometimes unknown to the general practitioner, was discovered (Andrews, Cowan and Anderson, 1971). For these reasons, plans are being set up to use the Health Visitor, a type of community nurse who functions primarily as a health educator, to visit people 70 years and over starting with those living alone or elderly couples alone. By using a structured and tested proforma, valuable information about the physical, social and mental healths of the old people can be obtained and a survey of the nutritional state can also be accomplished. From this type of ascertainment, relatively few people require to be physically examined by the general practitioner, but the health visitor can report the present health state of the individual to the general practitioner and seek his advice regarding future care. The endeavour is to try and detect illness at an earlier stage and to preserve the community concept in our large towns by the use of the Health Centre where at this local level there will be integration of services, not only between the community and the doctor but between the hospital and the Health Centre. The elderly persons or their relatives should only have to report through one door to receive the appropriate service for their needs.

Clinical examination in the elderly patient suspected to have heart failure should be made with four simple objectives: (1) to discover whether or not the patient is in cardiac failure; (2) to answer the question is the heart rhythm regular or irregular and if irregular what is the cause?; (3) to make an anatomical diagnosis

especially of valvular disease; and (4) to discover the precipitating factors of the cardiac failure. In the elderly the main points are — why has the patient heart failure at the time in question?; is the underlying cardiac failure due to heart disease (primary cardiac failure) or has it arisen from the inability of the heart to achieve the output demanded by circumstances outside the heart (secondary cardiac failure)? In the first instance treatment may need to be continued for life and in the second instance treatment of the extra cardiac disease, especially severe anaemia or thyrotoxicosis, often results in return of compensation with no need for perpetual therapy.

The blood pressure should be measured if possible in the lying and standing positions and a drop of 30 mm. of mercury or more should be taken as evidence of significant postural change. A systolic pressure of up to 220 mm. of mercury in those over the age of 80 and a diastolic of up to 110 mm. in those over 65 should be regarded as within normal limits.

The presence or absence of elevation of the venous pressure as judged by neck vein congestion should be carefully noted as this is a most crucial sign of heart failure in old age. It must be borne in mind that an elongated or dilated aortic arch may obstruct the venous return from the left side of the heart (Shirley Smith, 1960; Sleight, 1962). This would produce, therefore, a raised venous pressure in the left jugular vein and the pressure in the right jugular vein would reveal the true venous pressure. In this situation, increased venous pressure so caused on the left side is abolished by deep inspiration.

The site of the apex beat should be recorded but kyphoscoliosis can cause displacement of the apex beat and can render this totally unreliable as a sign of cardiac enlargement. Basal rales, hepatic enlargement and bilateral ankle oedema occurring together are evidence, as in young patients, of congestive cardiac failure. Diagnosis is vitally important as there is perhaps no more rewarding diagnosis in an elderly person than congestive cardiac failure.

### **Therapy**

While the main principles of therapy are as for younger people, it is essential to lay down a simple plan of treatment. Complicated regimens must be avoided in the elderly as the result may be that their final condition will be much worse

than the present one. Where many diseases co-exist the most urgent must be tackled first, and this is usually the cardiac failure. An effort should not be made to treat all the pathological conditions diagnosed at one and the same time unless in exceptional circumstances. This means a very commonsense approach to therapy where after the clamant illness is treated a re-assessment of the patient's long-term therapy is undertaken.

There are, however, three points worth noting: the first is digitalis toxicity, the second is potassium deficiency and the third is diuretic therapy.

### Digitalis

The classical indications for digitalis therapy is low output failure with atrial fibrillation and a rapid ventricular response. The increased contraction and the slowing allow the process of failure to be reversed and there is also some evidence to suggest that potassium retention in the myocardium is facilitated, thus perhaps correcting the basis of the failure. In regard to abuse of therapy, survey material is scarce but Hurwitz and Wade (1969) found that 19.8% of 192 hospital patients showed signs of toxicity; in the 70 to 79 age group it was 28.8% (19 of 66) and in the 80 to 89 age group 25% (7 of 28). When the newer diuretics were also given the general incidence of reactions amounted to 35%. Thomas (1971) has indicated that one main cause of abuse of therapy is that the diagnosis of congestive cardiac failure is incorrect, e.g., he stressed that a severely dyspnoeic chronic bronchitic can have incidental atrial fibrillation not requiring specific therapy.

Most would agree that the very important omission is the non-recognition or failure to treat anaemia. About 8% of the patients seen with congestive failure are anaemic and as Bedford and Caird found in 1956 the prognosis in these patients was largely that of the anaemia not the cardiac failure.

There is little point in switching from one kind of digitalis to another and rapid full digitalisation is hardly ever required in the elderly. Digoxin is the preparation most commonly used in the British Isles and usually 0.25 mg. is given twice a day for 3-4 days then once a day for about a fortnight followed by 0.25 mg. every other day and often this dose is reduced to once or twice per week. The use of the paediatric preparation 0.0625 mg. Digoxin daily for maintenance pur-

pose has been suggested and it felt that prolonged dosage of even 0.25 mg. daily can be dangerous. Intravenous digoxin therapy is seldom required in the elderly patient. The continuance of patients on maintenance therapy, especially in patients who have been accepted from another physician while on maintenance therapy, should be reviewed. Dall (1970) showed in a review of 80 patients on maintenance therapy that the drug could be discontinued without detriment in 70%. Pomerance (1965) found histological evidence of amyloid deposits in 10% of hearts in patients over 80 years and 50% over 90 years. It was more common in old men and congestive failure was present in one half of the cases and considered due entirely to the amyloid in one quarter. There were no clinically diagnostic features, nor is the ECG of use but digitalis sensitivity may be present. This diagnosis therefore could be considered in any very old man with heart failure and no specific features except cardiomegaly and digitalis sensitivity.

Plasma or serum digoxin levels may well provide safer control of "difficult cases" in future and from these investigations it can be shown that elderly subjects do not exhibit sensitivity but a higher concentration can be obtained with a smaller dose than in younger subjects (Evered et al., 1970... Chamberlain et al., 1970). The reason for this is slower excretion of digoxin in elderly people. However, cardiac response is not well correlated with plasma concentration.

Failure to recognize toxicity may occur in old people. Normally the therapeutic dose is about 60% of the toxic dose but the safety margin is less when congestive failure or potassium depletion are present. Mental changes and muscle weakness are often the earliest manifestations of toxicity while gastrointestinal disturbance and almost any type of dysrhythmia may occur. More rarely, gynaecomastia or xanthopsia may be observed. The current practice of prescribing digitalis and a diuretic for a long period even when potassium supplements are given should be reviewed as it may well be that the diuretic may be sufficient therapy.

### Potassium

Cox and his colleagues (1970) demonstrated in cardiac failure an excess of total body water, extracellular fluid and total exchangeable sodium and less total exchangeable potassium. There

was a decrease in total exchangeable sodium and increase in total exchangeable potassium on recovery from congestive cardiac failure and after treatment of cardiac failure, intracellular potassium increased and intracellular sodium was decreased. It may be then that people in cardiac failure are already at risk from potassium deficiency.

The main interest in my own department has been the nutritional requirements of potassium and the effect of potassium deficiency in older people. In random studies of nutritional intake in the elderly it has been found that many older people consume, in the West of Scotland, a borderline amount of potassium and that an acute illness, such as influenza, may precipitate severe potassium deficiency. In studying dietary potassium intake and muscle strength in older people, Judge and Cowan (1971) found in 50 men and 50 women 65 years and over being studied by chance selection that 60% of the women and 40% of the men had an inadequate dietary intake of potassium, i.e., less than 60 mEq. per day; all these subjects had normal serum levels of potassium. Serum potassium levels bear little relation to the potassium status of an individual and when dietary potassium and hand grip pressure were correlated there was found to be a decrease in hand grip pressure from the estimated value when the dietary intake decreased, i.e., with a decreased dietary potassium intake there is a decline in muscle strength although serum potassium levels are normal. In a nutritional study of elderly people caring for themselves at home, Judge and MacLeod (1968) showed that this group ate a diet containing less potassium than a comparative group of younger adults. The result was in accord with previous findings of Gibson and Pritchard (1965) of hypokalaemia in a significant number of admissions to a geriatric long-stay unit and of Judge (1968) investigating admissions to a geriatric assessment unit. Dall and his colleagues (1971) in a study of two groups of eight geriatric patients who were not acutely ill showed a dietary intake of potassium which was below normal while studies on convalescent surgical patients over the same period as one group of geriatric patients revealed that a normal intake of potassium was possible from the diet supplied. When given an oral diuretic the geriatric patients became hypokalaemic readily. A supplement of

24 mEq. potassium (1800 mg. Slow K) appeared to be a minimum requirement for replacement therapy to maintain serum potassium levels during treatment with a diuretic. Dall and Gardiner (1971) found that if geriatric patients taking a diet poorer than the average adult intake in potassium had taken a full pint of milk each day as part of the diet required all would have reached a low level of normal standard potassium intake. They felt this might be of clinical importance in patients receiving digitalis glycosides.

The elderly person requires a dietary intake of at least 60 mEq. of potassium per day and it is not to be wondered at that older people are liable to digitalis toxicity when many of them have a poor intake of potassium and may have the level of potassium in the serum decreased by diuresis or diarrhoea.

#### **Diuretic Therapy**

Diuretic therapy is perhaps the most useful in the older person with cardiac failure and is the great mainstay of treatment. Such drugs should be given orally except in pulmonary oedema when furosemide may be life saving given intravenously. In general, those with a rapid action (e.g., furosemide) should be given in the morning to avoid sleep disturbance but to cut down the risk of retention of urine or overflow incontinence some prefer the slower acting thiazides. All diuretics should be presumed to produce potassium depletion although amiloride given with a thiazide compound appears to reduce potassium loss and may obviate the need for potassium supplements.

Many other brighter aspects in the therapy of heart disease are now becoming apparent. The newer B-blockade drugs are much more helpful. Oxprenolol (Trasicor) seems to act by slowing the pulse and lowering systolic and diastolic blood pressure and thus reduces cardiac output. It has proved most effective in the management of angina pectoris. The contraindications are recent myocardial infarction, untreated congestive cardiac failure and bronchial asthma.

Most of the stimulating and progressive advances in the management of heart disease are now coming from a realisation of how well older people tolerate intervention of almost any type in properly selected cases. The earlier use of permanent pacemakers in the treatment of the Stokes-Adams syndrome, the most aggressive

surgical therapy of severe aortic stenosis and valve replacement in older people make this subject of particular interest to the physician working with older people.

The physician in geriatric medicine has to bear in mind constantly the help which his colleagues in cardiology and his friend the cardiac surgeon may have to give him. He must also remember that in older people, as in younger individuals, the fear of heart disease can be worse than the disease itself. Doctors must be extremely careful in communicating sensibly both with the patients and their relatives. The elderly person like any other expects from his physician an accurate diagnosis and therapy appropriate to his age with attention paid to his physical, social and mental health.

## REFERENCES

Andrews, G. R., Cowan, N. R. and Anderson, W. F. (1971). The Practice of Geriatric Medicine in the Community. In *Problems and Progress in Medical Care*. Edited by Gordon McLachlan. Oxford University Press, London.

Bedford, P. D. and Caird, F. I. (1956). Congestive Heart Failure in the Elderly. *Quart J. Med.* 25, 407.

Broe, A. T. and Caird, F. I. (1972). Personal communication.

Chamberlain, D. A., White, R. J., Howard, M. R. and Smith, T. W. (1970). Plasma Digoxin Concentrations in Patients with Atrial Fibrillation. *Brit. med. J.*, 3, 429.

Cox, J. R., Horrocks, P., Speight, Carol J., Pearson, Rosemary E. and Hobson, N. (1971). Potassium and Sodium Distribution in Cardiac Failure. *Clin. Sci.*, 41, 55.

Dall, J. L. C. (1970). Maintenance Digoxin in Elderly Patients. *Brit. med. J.*, 2, 705.

Dall, J. L. C., Panlose, S. and Ferguson, J. A. (1971). Potassium Intake of Elderly Patients in Hospital. *Geront. clin.*, 13, 114.

Dall, J. L. C., Gardiner, H. S. (1971). Dietary Intake of Potassium by Geriatric Patients. *Geront. clin.*, 13, 119.

Evered, D. C., Chapman, C. and Hayter, C. J. (1970). Measurement of Plasma Digoxin Concentration by Radio Immunoassay. *Brit. med. J.*, 3, 427.

Gibson, Iris I., J. M. and Pritchard, J. G. (1965). Screen Investigation of Elderly. *Geront. clin.*, 7, 330.

Helfant, R. H. and Ptashkin, D. (1969). Hemoeedema due to Congestive Heart Failure. *N.Y. State J. Med.*, 69, 2274.

Hurwitz, N. and Wade, O. L. (1969). Intensive Hospital Monitoring of Adverse Reactions to Drugs. *Brit. med. J.*, 1, 531.

Judge, T. G. (1968). Hypokalaemia in the Elderly. *Geront. clin.*, 10, 102.

Judge, T. G. and Cowan, N. R. (1971). Dietary Potassium Intake and Grip Strength in Older People. *Geront. clin.*, 13, 221.

Judge, T. G. and MacLeod, C. C. (1968). Dietary Deficiency of Potassium in the Elderly; Proc. of the 5th Europ. Meeting of Clin. Geront., Brussels, p. 295.

Kennedy, R. D. and colleagues (1972). Personal communication.

Pathy, M. S. (1967). Clinical Presentation of Myocardial Infarction in the Elderly. *Brit. Heart J.*, 29, 190.

Pomerance, A. (1965). Senile Cardiac Amyloidosis. *Brit. Heart J.*, 27, 711.

Rodstein, M. (1956). The Characteristics of Nonfatal Myocardial Infarction in the Aged. *Archives of Int. Med.*, 98, 84.

Sleight, P. (1962). Unilateral Elevation of the Internal Jugular Pulse. *Brit. Heart J.*, 24, 726.

Smith, K. Shirley (1960). The Kinked Innominate Vein. *Brit. Heart J.*, 22, 110.

Thomas, J. H. (1971). The Use and Abuse of Digitalis in the Elderly. *Geront. clin.*, 13, 285.

Williamson, J. (1966). Aging in Modern Society. Paper presented to the Royal Society of Health, Edinburgh, 9 November.

**Myelofibrosis in Chronic Granulocytic Leukemia**

H. R. Gralnick (Hematology Service, National Institutes of Health, Bethesda, Md 20014), J. Harbor, and C. Vogel

*Blood* 37:152-162 (Feb) 1971

In 181 patients with chronic granulocytic leukemia (CGL) 39 patients demonstrated myelofibrosis (MF) during the course of their disease. These groups can be divided into two groups: one group initially presenting with the clinical

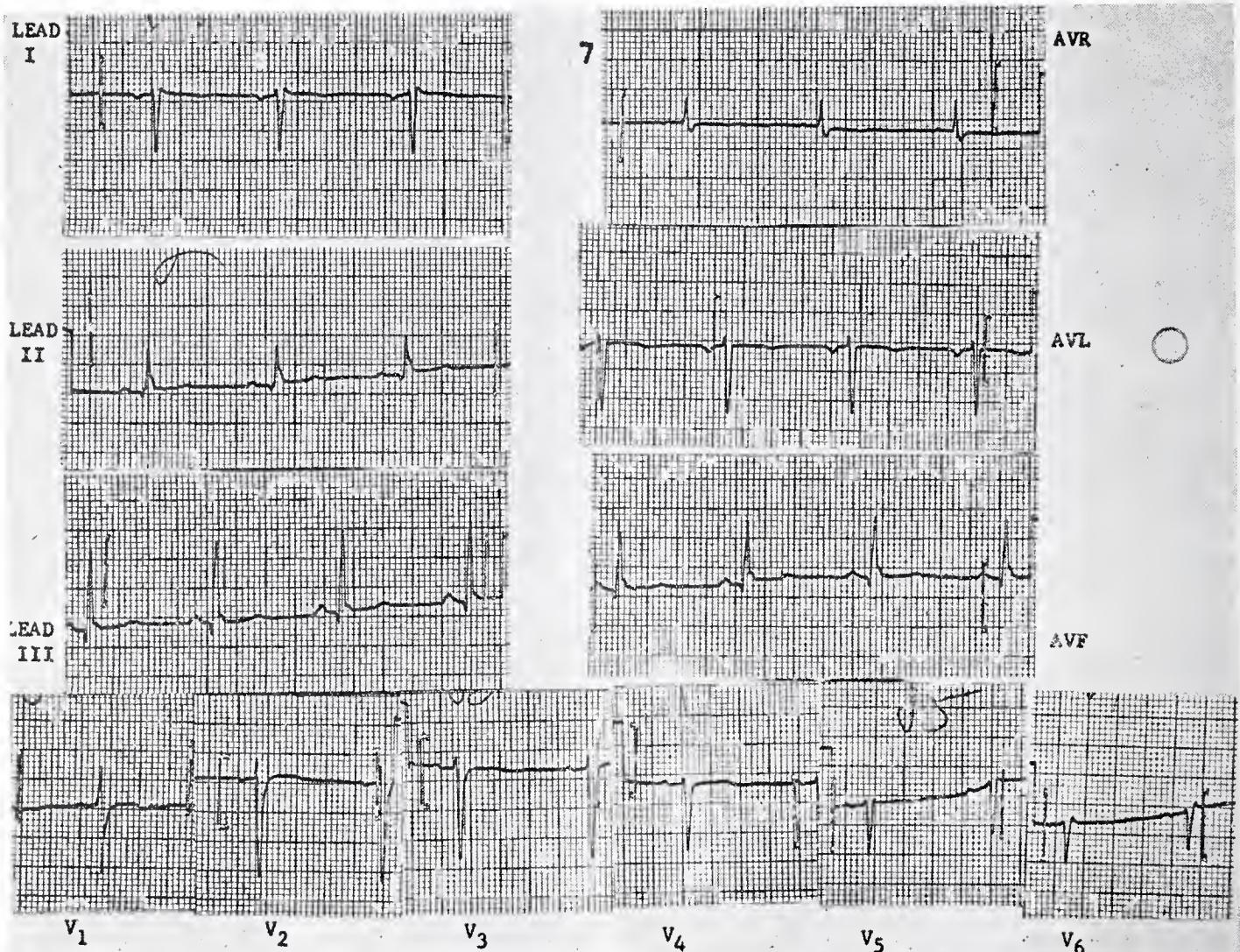
and lab findings of CGL but with concomitant MF and a second group in whom MF developed late in the course of CGL. The occurrence of MF with CGL was associated with three findings: elevation of the leukocyte alkaline phosphatase, very poor prognosis, and frequent association of MF and blastic transformation of CGL. MF should be considered an integral part of CGL and when present should be considered part of the terminal phase of CGL and treated accordingly.

# ELECTROCARDIOGRAM

# OF THE MONTH



See Answer on Page 131



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## The Role and Function of the Nurse in a Central Referral Chest Clinic

Kathryn Little, R.N., M.S.\*

Since the time of Florence Nightingale, nurses have functioned in a variety of settings and practiced their professions in an obedient and unquestioning manner, "following doctors' orders." Recently nursing authorities began to expound on the concept of the nurse functioning in a collaborative (partnership) role with patient and physician to plan the patient's care in terms of his nursing needs. This particular concept is the basis for the role of the nurse in the Central Referral Chest Clinic. Role is sometimes thought of in terms of a part in a stage play, but in this case it reflects the relationship one has in group interactions. Function refers to what the object or person does. The various components of the nurses role and function in the clinic include: 1) set the clinic climate, 2) influence a change in the patient's behavior through effective interactions with patient and family, 3) implement crisis intervention techniques in problem solving with patients who have multiple complex problems, 4) function in a collaborative relationship with physicians in providing patient care, 5) serve as a liaison person with Local Health Departments, hospitals, and agencies to provide for continuity of patient care, 6) serve as a referral agent for patient and family, 7) assist patient, family and health workers in learning about care and treatment of the tuberculosis patient.

Mycobacterium tuberculosis causes most of the pulmonary tuberculosis seen today in this country. The reservoir of human mycobacterium tuberculosis is infected persons. Mycobacteria are transmitted through air in droplets expelled

from the respiratory tract during coughing or sneezing.

Moisture in droplets may evaporate rapidly, leaving droplet nuclei less than 5 microns in size suspended in the air. When inhaled they may be carried to the depths of the lungs and deposited in terminal alveoli where infection can set up. Droplet nuclei may remain suspended in the room air for hours, but can be readily removed to the outside by proper ventilation. Control of airborne transmission of infection can be achieved by prompt treatment of the patient, good ventilation or disinfection of air or all three. There are certain factors that affect who gets tuberculosis; age, race and sex. New active case rates by age show the 65 year and older group with the highest rate and the 5 to 14 year old group with the lowest rate. By race and sex, rates are highest in non-white male and lowest in the white female. In all groups, rates increase with age except for children less than 5 years of age where rates are higher than those for the 5 to 14 year age group. A geographic distribution of rates show that large metropolitan areas along the Mexican border and in Appalachia and where a high proportion of the population is non-white or of low socio-economic status, the urban ghetto or slum dweller, the American Indian and the Alaskan native have higher case rates. Diagnostically, patients with alcoholism and/or diabetes tend to have higher rates of tuberculosis than the average population.

Nowadays, the tuberculosis patient should receive most, and sometimes all, of his treatment as an out-patient, either in a clinic, health

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center or physician's office. Patients with primary and minimal tuberculosis seldom need to be hospitalized for tuberculosis treatment. When in-patient care is needed, it should be considered as a phase of a patient's total continuous care from diagnosis to cure.<sup>1</sup>

*Active Tuberculosis* — Demonstration of tubercle bacilli by any method in the sputum, gastric aspirates or other sources denotes active tuberculosis.

*Clinician* — A physician who has specialized in the care and treatment of patients with disorders and diseases of the chest and thoracic cavity.

*Drug-Resistant Tuberculosis* — Active tuberculosis that has been shown by sensitivity studies to be resistant to one or more of the first line tuberculosis drugs. The patient no longer responds favorably to the administration of either Isoniazid, Paraminosalicytic acid or Streptomycin.

*Second line drugs* — Those used in treatment of tuberculosis after the disease has failed to respond favorably to Isoniazid, Paraminosalicytic acid and Streptomycin. Included in these are Myambutol, Pyraminamide, Xanamycin, Viomycin, Cyloserine, Ethionamide and Rifampin, which is currently under clinical trial in this country.

The purpose of the Central Referral Chest Clinic is for evaluation of out-patients with drug resistant tuberculosis and other complications.

Evaluation includes a thorough review of the person's record, a physical examination, special X-rays and laboratory studies to determine:

1. The cause, if it can be assessed, as to why the patient became drug resistant
2. The patient's socio-economic history to enhance future therapeutic efforts
3. The patient's present medical status regarding extent of pulmonary disease, degree of pulmonary function and liver and renal function
4. Plans for further evaluation and therapy
5. Location and treatment of contacts and suspects of patients within the City of Little Rock and encourage same from Local Health Departments for patients seen from other areas of Arkansas.<sup>2</sup>

The Central Referral Chest Clinic is located in Little Rock. This clinic was set up to provide comprehensive medical treatment and follow-up for drug resistant tuberculosis patients. Patients

living in all parts of the State are referred to the Clinic after drug resistance has been established by appropriate drug sensitivity studies. A part of the program is travel reimbursement for the patient of \$.09 a mile per trip.

Before the patient comes to the clinic, his records and X-rays are sent to the clinic by the local doctor and/or public health nurse, to be reviewed by the clinic team. The team is composed of three clinicians (internal medicine and thoracic specialists) and a public health nurse. The team decides if the person is a candidate for the clinic. During this conference, the patient's records and X-rays are studied by the clinic team. The nurse reviews past behavior patterns with the team to determine if the patient can benefit from an out-patient program. All aspects of the patient's history are weighed carefully with each member of the team contributing to discussion and final decision. The approach to the patient is decided on during this time. Each member of the team attempts to carry through with the same approach. This provides consistency for the patient in his contacts with clinic personnel. Approach varies with the individual patient's previous behavior patterns and assumed needs. However, it is based on philosophy of dignity and worth of all men. It usually employs the interaction principles of empathy, warmth and genuineness.

If it is felt that the person can benefit from services of the clinic, the nurse notifies the public health nurse by phone and sets up an appointment for the patient on an approaching Wednesday. This call is followed by a letter and either a bus ticket for the patient or instructions regarding re-imbursement for travel by private car.

When interviewing the patient for nursing history, the nurse is careful to be completely honest with the patient. The interview strives to obtain information which will give clues to the patient's self concept, feelings about his disease, previous treatment and what his expectations are regarding the clinic. Areas considered include, psychosocial, cultural, economical and physical.

After the initial interview the patient is introduced to the clinic procedures. He is taken to the sputum collection room and instructed regarding the production of an adequate specimen and to the Devilbiss nebulizer and instructed regarding its use. The importance of the specimen is explained to the patient in terms of how

these specimens tell of his progress and, therefore, help regulate his treatment. Again, he is made to feel a part of the treatment team. Blood is drawn for baseline studies for Blood Urea Nitrogen, Serum Glutamic Oxyglase Transaminase and Uric Acid studies. These studies will help in monitoring response to anti-tuberculosis drugs. Vision and hearing are checked for the same purpose.

The nurse introduces the patient to the clinician and they sit down together to discuss possibilities of treatment. The nurse and patient relate pertinent information which might influence the plan of care. The short and long term goals of treatment are discussed with the patient and he must decide if he is willing to undertake the treatment program for two years. The clinician usually outlines several approaches to the plan of treatment. The patient and clinician then mutually agree on the most desirable plan. Once treatment is established the medication schedule must be decided. The clinician decides what drugs and dosage the patient needs, then with advice and consent of the public health nurse the medication schedule is constructed. The medication program will consist of two or more oral second-line treatment drugs and one injectable. Injections are usually given by the public health nurse in the patient's home. There are various combinations of these drugs and choice is influenced by previous reactions to certain drugs, sensitivity to drugs and individual preference of the clinician. Drugs of choice and their actions are explained and shown to the patient. He is asked then to restate this in his own words. This is to activate the generally accepted philosophy of the clinic team of "the more the patient knows about his disease and treatment, the more likely he is to follow through with the treatment."

The nurse then dispenses the drugs and again asks the patient to tell her what they are for, how much will be taken and when they are to be taken. Whenever possible, medications are given at one time to facilitate the patient's remembering to take them. The nurse works with the patient to establish a consistent time of day for taking drugs, such as breakfast or before going to bed. Patterning like this has proven to be most helpful to patients who are required to take medicines daily for long periods of time.

Before leaving the clinic, the patient is interviewed by the nurse regarding his feeling about his first day in the clinic. The patient is given an opportunity to ask questions and to express himself freely at this time.

The patient receives an appointment to return to the clinic, usually in two weeks and to see the public health nurse the next day. The nurse will contact the public health nurse by phone to inform her of the treatment program. The doctor's written orders follow in the next day's mail. Emergency orders are included with each set of drug orders to provide treatment of possible drug reactions. The local nurse is encouraged to contact the clinic nurse at any time. This continuous exchange of information provides for continuity of care for the patient.

When the patient returns to the clinic plans will have been made for him to be included in a formal session of patient education. This may be in the form of a film presentation followed by discussion or a game relating to tuberculosis and its treatment. This game provides an opportunity for exchange of ideas and presentation of essential information in a manner that is acceptable and pleasing to patients. Six to eight usually participate in the game with one of the clinic personnel playing and acting as a resource person. This frequently may be the clinic aide who reads for patients with visual problems, answers questions and stimulates conversation.

The nurse's relationship with other clinic personnel is of primary importance. She serves as a role model and teacher for them. If she is warm, accepting and out-going in her interactions with others, then other personnel will more likely act in this manner.

In working with the clinician, the nurse indicates a thorough understanding of the patient's needs, both physical and psycho-social. It is through this knowledge that the nurse is able to implement the collaborative role with the clinician. Essential to this role is a clear delineation of medical (treatment) needs and nursing (supportive) needs of the patient.

In assisting the patient in solving complex problems, the nurse uses the crisis intervention technique as described by Aguilera and associates.<sup>3</sup>

The nurse in the Central Referral Chest Clinic must be able to: interact effectively with others, be a warm, accepting individual, have a thorough

knowledge of public health nursing, communicable disease control, human behavior, care and treatment of tuberculosis patients and have a working knowledge of other helping agencies and institutions.

## REFERENCES

1. A statement of the Ad Hoc Committee for Quality Care for Tuberculosis. "Standards for Tuberculosis Treatment in the 70's — N. T. R. D. A. New York: N. L. N. Pub. Co., 1970.
2. Arkansas State Health Department, Division of Communicable Disease Control. Manual on Tuberculosis. Little Rock, Arkansas, 1968.
3. Aguilera, Donna C. and others. *Crisis Intervention, Theory and Methodology*. St. Louis: C. V. Mosby, 1970.



## EDITORIAL

**Acupuncture**

C. Lewis Hyatt, M.D.\*

I have never seen an acupuncturist or an acupuncture needle. Like Will Rogers, I just know what I read in the papers. But that makes me just about as much an expert as most of the people who are writing about it these days.

It is amusing and a little alarming that well trained scientific physicians would accept acupuncture as a wonderful new method of treatment. There is no direct anatomical correlation between the treatment points and the organ or area of treatment in the human body. This doesn't mean there can't be an effective use here, because disassociation can be a very large factor in the result.

With its graphic charts, long history of usage, pseudo-scientific jargon, shiny needles and application by the established healers of the community — scientific or not, acupuncture represents an effective catalyst for the application of suggestion and hypnosis. Because of this it can have a very beneficial effect, but it should be clearly recognized as such and not accepted as a healing method or anesthetic agent per se.

All healing methods have advocates and almost all of them have some effectiveness whether by laying on of hands, ventilation, suggestion, instillation of confidence and hope, or by the application of truly scientific methods.

In practically every glowing account of remarkable results by acupuncture there is also mention of narcotics, analgesics, application of electric current or use of antibiotics and other potent drugs. For instance, Dr. Walter Tkach writing in July 1972 *Today's Health*, p. 50, states, "I also saw three men who had been completely cured of deadly peritonitis by a combination of antibiotics, Chinese herbal medicine and acupuncture." How many thousands upon thousands of cases of peritonitis have been successfully treated in this country by the use of antibiotics and no acupuncture?

There is much to be learned about hypnosis. However, I am sure anything that can be done by an acupuncturist in the treatment of illness or application of anesthesia can be done better by an experienced hypnotist, and he doesn't need the needles.

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# MEDICINE IN THE NEWS

## THE MONTH IN WASHINGTON

The 1972 Democratic campaign platform calls for establishment of a federally-administered, comprehensive national health insurance system to cover all Americans and to incorporate eventually all federal health programs.

The majority of the Democratic platform committee proposed that the system be financed by the federal government. A minority wanted it financed under social security.

The health care plank was hammered out by Democratic policy makers in Washington prior to the presidential nominating convention in Miami Beach. Several positions, including the stand on Health Maintenance Organizations, in the health care plank were similar to those of the American Medical Association.

Health care parts of the platform proposed by the majority of the drafting committee include:

### HEALTH CARE

Good health is the least this society should promise its citizens. The state of health services in this country indicates the failure of government to respond to this fundamental need. Costs skyrocket while the availability of services for all but the rich steadily decline.

We endorse the principle that good health is a right of all Americans.

America has a responsibility to offer to every American family the best in health care wherever they need it, regardless of income or where they live or any other factor.

To achieve this goal the next Democratic Administration should:

— Establish a system of universal national health insurance which covers all Americans with a comprehensive set of benefits including preventive medicine, mental and emotional disorders, and complete protection against catastrophic costs, and in which the rule of free choice for both provider and consumer is protected. The program should be federally-financed and federally-administered. Every American must

know he can afford the cost of health care whether given in a hospital or a doctor's office;

— Incorporate in the national health insurance system incentives and controls to curb inflation in health care costs and to assure efficient delivery of all services;

— Continue and evaluate Health Maintenance Organizations;

— Set up incentives to bring health service personnel back to inner-cities and rural areas;

— Continue to expand community health centers and availability of early screening diagnosis and treatment;

— Provide federal funds to train added health manpower including doctors, nurses, technicians and para-medical workers;

— Secure greater consumer participation and control over health care institutions;

Expand federal support for medical research including research in heart disease, hypertension, stroke, cancer, sickle cell anemia, occupational and childhood diseases which threaten millions and in preventive health care;

— Eventual replacement of all federal programs of health care by a comprehensive National Health Insurance System;

— Take legal and other action to curb soaring prices for vital drugs using anti-trust laws as applicable and amending patent laws to end price-raising abuses, and require generic-name labeling of equal-effective drugs; and

— Expand federal research and support for drug abuse treatment and education, especially development of non-addictive treatment methods.

On birth control, the platform states:

— Family planning services, including the education, comprehensive medical and social services necessary to permit individuals freely to determine and achieve the number and spacing of their children, should be available to all, regardless of sex, age, marital status, economic group or ethnic origin, and should be administered in a non-coercive and non-discriminatory manner.

**On rights of veterans:**

— MEDICAL CARE: The federal government must guarantee quality medical care to ex-service-men, and to all disabled veterans, expanding and improving Veterans Administration facilities and manpower and preserving the independence and integrity of the VA hospital program. Staff-patient ratios in these hospitals should be made comparable to ratios in community hospitals. Meanwhile, there should be an increase in the VA's ability to deliver out-patient care and home health services, wherever possible treating veterans as part of a family unit.

We support future integration of health care for veterans into the national health care insurance program, with no reduction in scale or quality of existing veterans care and with recognition of the special health needs of veterans.

The VA separate personnel system should be expanded to take in all types of health personnel, and especially physician's assistants; and VA hospitals should be used to develop state medical schools and area health education centers.

The VA should also assume responsibility for the care of wives and children of veterans who are either permanently disabled or who have died from service-connected causes. Distinction should no longer be made between veterans who have seen "wartime", as opposed to "peacetime", service.

**For the elderly:**

— Establish federal standards and inspection of nursing homes and full federal support for qualified nursing homes;

— Pending a full national health security system, expand Medicare by supplementing trust funds with general revenues in order to provide a complete range of care and services; eliminate the Nixon Administration cutbacks in Medicare and Medicaid; eliminate the part B premium under Medicare and include under Medicare and Medicaid the costs of eyeglasses, dentures, hearing aids, and all prescription drugs and establish uniform national standards for Medicaid to bring to an end the present situation which makes it worse to be poor in one state than in another.

Before the platform was drafted, two of the Democrats' big guns on health care in Congress appeared jointly for the first time at a platform subcommittee pre-drafting hearing in St. Louis. They were Rep. Wilbur D. Mills of Arkansas and Sen. Edward M. Kennedy of Massachusetts. They

showed themselves together in support of a broad national health insurance but still were not in agreement over how it should be financed and administered.

The platform committee accepted Kennedy's views on these two points but Mills' ideas probably will carry more weight when Congress gets around to taking up such legislation.

"The federal government should establish a system of compulsory national health insurance which covers all Americans with a standard, comprehensive set of basic health insurance benefits supplemented by protection against catastrophic costs," said the Mills-Kennedy statement which included four "freedom guarantees":

— The federal government should not own and operate the various elements of the health care system.

— The federal government should not remove the freedom of every physician and every patient to choose where and how they will give or receive health care.

— Neither the federal government, nor any of its agents, shall make any medical judgments in a patient's care; this function is reserved solely to the physician and his peers.

— The federal government shall not make community health policy but shall offer financial and technical support and information and guidelines based on national planning to support local policy formulation.

Dr. John R. Kernodle, then vice chairman (now chairman) of the AMA Board of Trustees, urged that any national health insurance program supported by the Democratic party be feasible as to benefits, financially responsible and be built on the present proven system of health care delivery.

"In considering any proposal for national health insurance, it is important that several factors receive a careful evaluation," Dr. Kernodle said. "First, the program must be feasible in terms of services offered and promises made. It should not hold out promise of benefits which cannot be fulfilled. We urge that any program should be financially responsible, so that public funds are utilized principally to provide financial assistance to those individuals who cannot finance their own medical care through their personal resources. The adoption of any national health insurance plan which undertakes the total medical care of everyone, regardless of their

financial circumstances, and does this at public expense, is unwarranted. We would further urge that any plan which is adopted by your Committee also incorporate the use of those private institutions and those private resources and those proven methods of health care delivery which have provided to the people of the United States high quality medical care. Any plan should build on those strengths of the present system and be the means by which a new era of good health and productivity is ushered in for the American people . . .

The physicians of America have always maintained that high quality medical care should be available for all Americans, including those who need financial assistance in meeting the cost of such care. We believe that the public health care dollar is used most effectively when it is applied principally for the benefit of those individuals and families whose financial circumstances preclude them from acquiring health insurance protection from their own funds. We believe strongly that to a maximum degree possible any national health insurance program should utilize those mechanisms which have proved themselves to be beneficial in the provision of care to private patients. At the same time we favor experimentation, innovation, and the trial of multiple alternative methods for health care delivery to promote the evolutionary development of productive and viable systems of health care appropriate to the needs of a variety of communities."

"We believe that this policy of providing most financial help to those who require help and to permit them the dignity of private care is best incorporated in a proposal which was written by the medical profession known as Medicredit and which has been sponsored by 172 members of the present 92nd Congress. This program, using tax credits, enables all individuals to acquire the type of health care services they prefer. It provides a uniform level of benefits — comprehensive in scope."

Sen. George McGovern of South Dakota, who all but tied up the Democratic nomination for president before the party's convention, recently outlined his views on health care in a Senate speech which could be termed his "white paper" on the subject.

"The nation's health care system is in critical condition," McGovern said.

"Overall, it costs about \$70 billion a year in private payments and public taxes.

"But it is not delivering the treatment Americans need, when they need it, where they need it, and at prices they can afford.

"And it is falling far behind in recruiting and training the people we must have to preserve the nation's health in the future . . .

"The federal government cannot and should not attempt to solve all health problems by itself. It cannot do the work of state and local governments, doctors and other health personnel.

"But certainly it must take the leadership role in medical care. It is the federal government's ultimate responsibility to assure the health and welfare of the American people."

He proposed five "new directions to help fulfill" that federal obligation:

— "First, we must adopt legislation to insure against the spiral in health bills borne by the individual . . .

— "Second, we should greatly improve the organization and efficiency of the entire health delivery system . . .

— "Third, emergency medical services should be dramatically improved . . .

— "Fourth, medical services must be delivered to areas of acute shortage, particularly in rural areas and central cities . . .

— "Fifth, action is needed to stem the rising cost of drugs."

\* \* \*

#### **ANSWER—Electrocardiogram of the Month**

This patient's chest film revealed the cardiac silhouette to be totally inverted (i.e. the apex and aortic knob were on the right side). Moreover, a barium enema revealed abdominal situs inversus as well. Diagnosis: Situs inversus (mirror image dextracardia).

The great majority of patients with this disorder have otherwise normal hearts; this is in contrast to patients with dextraversion, most of whom have additional cardiac malformations.

Note the inverted P waves and negative QRS complexes in leads I and AVL and negative ventricular complexes across the precordium.

## AROUND THE ANNUAL SESSION



#1: Immediate Past President Stanley Applegate and Mrs. Applegate display plaque expressing Society's appreciation to Dr. Applegate for his service as president.



#2: Dr. and Mrs. Robert Watson during Inaugural Banquet at which Dr. Watson was installed as president of the Society.



#3: Mrs. Gordon P. Oates, past president of the Woman's Auxiliary, pauses between convention meetings.



#4: Dr. and Mrs. W. J. Schwarz of Little Rock arrive at the Arlington for the convention.



#5: Members of the senior class at the University of Arkansas School of Medicine were guests of the Society for a luncheon on Monday at the convention.



#6: Dr. L. A. Whittaker, Dr. Charles Floyd and Dr. A. C. Bradford, all of Fort Smith, get together for an informal conference during the convention.



DR. WATSON IS HONORED

#7 & #8: During the Inaugural Banquet at the convention, Dr. Robert Watson was surprised with a scroll and symbol of induction

into the "Mystic Order of Wild Turkey Hunters." The presentations were made by Dr. H. W. Thomas of Dermott.

#### COUNCIL MINUTES

The Council of the Arkansas Medical Society met at 5:00 P.M. on Saturday, July 29, 1972, in the Sheraton Hotel, Little Rock. The following members of the Council and guests were present: Long, Watson, Shuffield, Saltzman, Kirkley, Paul Gray, John Bell, Pat Bell, Burge, Irwin, Duzan, Jameson, Kemp, McCrary, Orr, Kolb, Henry, Chudy, Wilkins, Kahn, Hyatt, Whittaker, Fowler, James Weber, Edgar Easley, John Harrel, Winston Shorey, George Mitchell, Mr. Paul Harris, Mr. Warren, Mr. Schaefer, Mr. Rainwater, and Miss Richmond.

The Council transacted business as follows:

1. Voted to implement the following proposals, pending consideration of Constitutional amendments by the House of Delegates:

A. Councilors be required to submit to the Council a written report of the activities within their district;

B. Holding of councilor district meetings be required at specified times or intervals;

C. Vice Presidents be responsible for stimulating activity of, maintaining liaison with, and guiding the committees of the Society.  
Motion for adoption was by McCrary.

2. Selected the following for nomination to the American Medical Association Board of Trustees to fill vacancies which will occur at the end of the year:

Ben N. Saltzman: Council on Environmental and Public Health, Council on Voluntary Health Agencies.

W. Payton Kolb: Council on Mental Health.

C. Randolph Ellis: Committee on Medicine and Religion.

Morriss Henry: Council on Legislation.

3. Upon the motion of Kolb, the Council voted to approve the concept of a Foundation for Medical Care and to begin work for implementation. The motion also included approval of the proposed by-laws presented by the committee.

4. Mr. Warren reported that he had filed action to challenge the method of determining "usual, customary and reasonable" fees by the insurance companies in a case against the General American Insurance Company in the Circuit Court of Pulaski County.

5. Mr. Warren reported that he had, with the authorization of the Executive Committee, protested a proposed 30% rate increase for physician malpractice insurance by Aetna and had requested a hearing on the proposed increase.

6. The Council voted, upon motion by Kolb, to appoint Kenneth Jones of Little Rock to replace Austin Grimes as the Orthopaedic representative on the Professional Services Review Organization.

7. McCrary moved that the Council authorize members of the PSRO to have a substitute at-

tend meetings when they are unable to do so. The PSRO member is responsible for selecting the substitute and furnishing him with the meeting agenda materials. The substitute will have voting privileges. Upon second by Salzman, the Council so voted.

8. The Council voted to appoint E. L. Hutchison of Pine Bluff and Sybil Hart of Blytheville to the Ark-Pac Board to replace two physicians who declined appointments to the Board.

9. Upon motion of Henry, the Council voted to request that the Executive Committee select Society representatives for the Health Careers Council and MEDIHC, after consultation with prospective representatives.

#### EXECUTIVE SESSION

In Executive Session, the Council transacted the following business:

1. Voted budget increase of \$5,000 to cover cost of additional employee, a part-time employee, and salary increases which had been deferred because of wage and price controls. Motion was made by Saltzman and approved.

2. Voted to furnish an automobile for the use of the Assistant to the Executive Vice President. Purchase of the automobile was authorized, upon motion by Paul Gray and McCrary.

APPROVED: C. C. Long, M.D.  
Chairman of the Council

\* \* \* \*

#### SUPPLEMENT TO COUNCIL MINUTES OF JULY 29, 1972 BY-LAWS of

#### ARKANSAS FOUNDATION FOR MEDICAL CARE

We, the Directors of the above entitled corporation, under the Arkansas Non-Profit Corporation Act, hereby adopt the following By-Laws for the government of said corporation, the regulation of its affairs, and the carrying on of its business.

#### ARTICLE I MEMBERSHIP

##### *1. Classes of Membership:*

There shall be two classes of membership in this corporation, as follows: Corporate Members and Participating Members.

In addition to the members referred to above, the Board of Directors may designate other persons who may take part in the projects to be carried out under the direction or control of the

corporation, under such terms and conditions as the Board of Directors may determine.

##### *2. Corporate Members:*

Corporate Members shall consist of those persons who are members of the House of Delegates of the Arkansas Medical Society, an Arkansas non-profit corporation. Every such person upon becoming a member of the House of Delegates of the Arkansas Medical Society shall become, without any further proceeding, a Corporate Member of this corporation. Each Corporate Member shall remain such only during the time that he is a duly qualified and acting member of the House of Delegates of the Arkansas Medical Society, and each such Corporate Member upon ceasing to be a member of said House of Delegates shall immediately and automatically and without notice, hearing, or affirmative action on the part of this corporation, lose and forfeit such Corporate membership, and any and all rights, powers, or privileges pertaining thereto.

Upon becoming a Corporate Member, a physician shall not automatically become a Participating Member, but may apply for Participating Membership as hereinafter provided in Section 3 of this Article.

##### *3. Participating Members:*

Any physician, who is authorized by the statutes of the State of Arkansas to practice medicine in the State of Arkansas and who is eligible for membership in the Arkansas Medical Society, shall be eligible to apply for election as a Participating Member in this corporation; provided, however, that the Board of Directors of this corporation shall have the right to refuse such application for membership, if in their sole discretion, they shall find that such physician shall not be of good moral character or in any other way be not qualified to practice medicine, or to have been guilty of unprofessional conduct or of conduct unbecoming a person licensed to practice medicine, or of conduct detrimental to the best interest of the public.

##### *4. Selection and Removal of Participating Members:*

Any physician, (whether a Corporate Member or other physician) who desires to become a Participating Member of this corporation shall complete and file such application for that purpose as may be required by the Board of Directors. Such application shall contain a provision where-

by the applicant agrees to be bound by the By-Laws of the corporation and such rules and regulations as may be adopted by the corporation and agrees to be bound by the principles of medical ethics, as interpreted by the American Medical Association and the Arkansas Medical Society. The Board of Directors of the corporation shall have the right to reprimand or to cancel or suspend from membership any Participating Member who has been found by the Board of Directors to be guilty of violation of the By-Laws or rules and regulations of this corporation or of said principles of medical ethics, or not to be of good moral character or in any other way not qualified to practice medicine, or to have been guilty of unprofessional conduct or of conduct unbecoming a person licensed to practice medicine, or of conduct detrimental to the best interest of the public.

The Board of Directors shall be authorized to adopt such rules and regulations as it may deem reasonable for the processing of applications for Participating Membership, and for the discipline of Participating Members.

#### *5. Rights, Privileges and Obligations of Participating Members:*

The Board of Directors may adopt such rules and regulations as it may deem proper, not inconsistent with these By-Laws, governing the rights, privileges and obligations of Participating Members.

The privilege of being heard at the meetings of the Corporate Members and at the meetings of the Board of Directors shall be granted to Participating Members, subject to such limitations as the Corporate Members or the Board of Directors respectively may determine.

#### *6. Dues and Assessments:*

Dues and Assessments, if any, to be charged to or imposed upon the Corporate or Participating Members of the corporation or other persons who may take part in any project of the corporation shall be determined by the Board of Directors.

#### *7. Voting Rights:*

The right to vote shall be held by Corporate Members only and each such Corporate Member shall be entitled to one vote on all propositions submitted to the members.

The Board of Directors, however, may seek the advice of the Participating Members by submitting such questions concerning the projects of

the corporation as it may deem proper to a vote of the Participating Members.

Cumulative voting and voting by proxy shall not be permitted.

#### *8. Interest in Property:*

None of the members of this corporation shall ever have any right to or interest in any of the property, real or personal of any kind or description, which is now or may in the future be owned and controlled by the corporation.

### ARTICLE II MEETINGS OF THE CORPORATE MEMBERS

#### *1. Annual Meetings:*

The annual meeting of Corporate Members of this corporation shall be held on the first day of the annual session of the Arkansas Medical Society.

#### *2. Special Meetings:*

A special meeting of the Corporate Members of this corporation may be called at any time by the President, the Board of Directors, or by not less than one-third of such Corporate Members.

#### *3. Place of Meeting:*

Each annual meeting of the Corporate Members of the corporation shall be held at the same place designated as the place of meeting for the annual session for such year of the Arkansas Medical Society. The Board of Directors may designate any place, either within or without the State of Arkansas, as a place of meeting for any special meeting called by the Board of Directors. If no designation is made, or if a special meeting be otherwise called, the place of meeting shall be the registered office of the corporation in the State of Arkansas.

#### *4. Notice of Meeting:*

Written notice stating the place, day and hour of any meeting of Corporate Members shall be delivered either personally or by mail, to each Corporate Member, not less than 10 nor more than 50 days before the date of such meeting, by or at the direction of the President, or the Secretary, or the officers or persons calling the meeting. In case of a special meeting, the purpose or purposes for which the meeting is called shall be stated in the notice. If mailed, the notice of meeting shall be deemed to be delivered when deposited in the United States mail addressed to such Corporate Member at his address as it appears on the records of the corporation, with postage thereon prepaid.

*5. Informal Action by Corporate Members:*

Any action required by law to be taken at a meeting of the Corporate Members, or any action which may be taken at a meeting of such members, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of such members entitled to vote with respect to the subject matter thereof.

*6. Quorum:*

One-third of the Corporate Members shall constitute a quorum at any such meeting. If a quorum is not present at the meeting, a majority of the Corporate Members present may adjourn the meeting from time to time without further action.

*7. Voting:*

A majority of the Corporate Members present at a meeting at which a quorum is present shall be necessary for the adoption of any matter to be voted upon by such members, unless a greater percentage is required by law or by these By-Laws.

### ARTICLE III BOARD OF DIRECTORS

*1. General Powers:*

The affairs of this corporation shall be managed by its Board of Directors.

*2. Number, Tenure, and Qualifications:*

The Board of Directors shall consist of those persons who are voting members of the Council of the Arkansas Medical Society. When any councilor of the Arkansas Medical Society shall cease to be a councilor, he shall immediately and automatically and without notice, hearing, or any affirmative action on the part of this corporation, cease to be a member of the Board of Directors. Except as herein above stated, each Director shall serve until his term expires or until his successor shall have been duly elected and qualified.

*3. Regular Meetings:*

The regular annual meeting of the Board of Directors shall be held without other notice than this By-Law, immediately after, and at the same place as the annual meeting of the Corporate Members of the corporation. The Board of Directors may provide by resolution the time and place, either within or without the State of Arkansas, for the holding of additional regular meetings of the Board without other notices than such resolution.

*4. Special Meetings:*

Special meetings of the Board of Directors may be called by or at the request of the President or any two Directors. The person or persons authorized to call special meetings of the Board may fix any place, either within or without the State of Arkansas, as the place for holding any such special meeting of the Board called by them.

*5. Notice:*

Notice of any special meeting of the Board of Directors shall be given at least two days previously thereto by written notice delivered personally or sent by mail or telegram to each Director at his address as shown by the records of the corporation. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail in a sealed envelope so addressed, with postage thereon prepaid. If notice be given by telegram, such notice shall be deemed to be delivered when the telegram is delivered to the telegraph company. The attendance of a Director at any meeting shall constitute a waiver of notice of such meeting, except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board need be specified in the notice or waiver of notice of such meeting, unless specifically required by law or by these By-Laws.

*6. Quorum:*

A majority of the Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board; but if less than a majority of the Directors are present at said meeting, a majority of the Directors present may adjourn the meeting from time to time without further notice.

*7. Voting:*

The act of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless the act of a greater number is required by law or by these By-Laws.

*8. Vacancies:*

Any vacancy occurring in the Board of Directors and any directorship to be filled by reason of an increase in the number of directors shall be filled by election by the Board of Directors. A

director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office.

#### *9. Compensation:*

Directors as such shall not receive any stated salaries for their services, but by resolution of the Board of Directors reasonable compensation and expenses of attendance, if any, may be allowed for attendance at regular or special meetings of the Board; but nothing herein contained shall be construed to preclude any Director from serving the corporation in any other capacity and receiving compensation therefor.

#### *10. Informal Action by Directors:*

Any action required by law to be taken at a meeting of Directors, or any action which may be taken at a meeting of Directors, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the Directors.

#### *11. Removal of Directors:*

Any Director may be removed at any time, with or without cause, by a majority vote of the members at any annual meeting of the members or at any special meeting of the members called expressly for that purpose.

### ARTICLE IV ADVISORY COUNCIL

There shall be an advisory council, whose purpose shall be to advise and counsel with the officers and directors of this corporation on any matters which may be of proper concern or interest to the corporation. This council may include but need not be limited to persons from various organizations or groups who are especially involved or interested, either as providers or consumers, in the field of health care, in the State of Arkansas, and also other persons who, by reason of training and experience, may be qualified to provide valuable advice and assistance to the work of the corporation. The members of this council shall be elected by the Board of Directors, at the regular annual meeting of the Board of Directors, and shall serve for terms of one year, or until their successors shall have been duly elected and qualified. The number of the members of the advisory council shall be established by the Board of Directors.

### ARTICLE V OFFICERS

#### *1. Officers:*

The officers of the corporation shall be a

President, who shall also serve as Chairman of the Board of Directors, a Vice-Chairman of the Board of Directors, an Executive Vice-President, a Senior Vice-President, one or more other Vice-Presidents, a Secretary, a Treasurer, and such other officers as may be elected in accordance with the provisions of this Article. The relative rank and authority of the three classifications of Vice-President shall be in the order on which they are named above. The Board of Directors may elect or appoint such other officers, including one or more assistant secretaries, one or more assistant treasurers, one or more project directors, and such other administrative officers as it may deem desirable, such other officers to have the authority and perform the duties prescribed from time to time by the Board of Directors. Any two or more offices may be held by the same person, except the offices of President and Secretary.

#### *2. Election and Term of Office:*

The officers of the corporation shall be elected annually by the Board of Directors at the regular annual meeting of the Board of Directors. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. New offices may be created and filled at any meeting of the Board of Directors. Each officer shall hold office until his successor shall have been duly elected and qualified.

#### *3. Removal:*

Any officer elected or appointed by the Board of Directors may be removed at any time, with or without cause, by the Board of Directors whenever in its judgment the best interests of the corporation would be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the officer so removed.

#### *4. Vacancies:*

Any vacancy in any office because of death, resignation, removal, disqualification or otherwise, may be filled by the Board of Directors for the unexpired portion of the term.

#### *5. President:*

The President shall be the executive head of the corporation, and shall have general supervision over the business and affairs of the corporation. He shall preside at all meetings of the members and of the Board of Directors.

#### *6. Vice-Chairman of the Board of Directors:*

The Vice-Chairman of the Board of Directors

shall be elected by the Board of Directors from those persons duly elected to and serving on the Board of Directors; and he may continue in this office only as long as he serves as a member of the Board of Directors. In the absence of the President or in the event of his inability or refusal to act, the Vice-Chairman of the Board shall perform the duties of the President, and when so acting shall have all the powers of and be subject to all the restrictions upon the President. The Vice-Chairman of the Board shall perform such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

*7. Treasurer:*

If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his duties in such sum and with such surety or sureties as the Board of Directors shall determine. He shall have charge and custody of and be responsible for all funds and securities of the corporation; receive and give receipts for moneys due and payable to the corporation from any source whatsoever, and deposit all such moneys in the name of the corporation in such banks, trust companies or other depositories as shall be selected in accordance with the provisions of these By-Laws; and in general perform all the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

*8. Secretary:*

The Secretary shall keep the minutes of the meetings of the members and of the Board of Directors in one or more books provided for that purpose; see that all notices are duly given in accordance with the provisions of these By-Laws or as required by law; be custodian of the corporate records and of the seal of the corporation and see that the seal of the corporation is affixed to all documents, the execution of which on behalf of the corporation under its seal is duly authorized in accordance with the provisions of these By-Laws; keep a register of the post office address of each member which shall be furnished to the Secretary by such member; and in general perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

*9. Executive Vice-President:*

The office of Executive Vice-President shall be filled by the person who holds the office of Executive Vice-President (or such other title as may hereafter be given to that office) of the Arkansas Medical Society. Subject to the control of the President and of the Board of Directors, he shall in general direct and supervise the administration of the business and affairs of the corporation.

*10. Senior Vice-President:*

The Senior Vice-President shall, subject to the direction and control of the President, the Board of Directors, and the Executive Vice-President, be responsible for the administration and supervision of the business and affairs of the corporation.

*11. Other Vice-Presidents:*

The other Vice-Presidents shall perform such duties as from time to time may be assigned to them by the President, the Board of Directors, the Executive Vice-President, or the Senior Vice-President.

*12. Project Director:*

Any Project Directors shall serve under the general supervision and direction of his superior officers. He shall supervise the administration of such projects as may be assigned to him, and shall perform such other duties as may be delegated to him by the Board of Directors, the President, or his other superior officers.

*13. Assistant Treasurers and Assistant Secretaries:*

If required by the Board of Directors, the Assistant Treasurers shall give bonds for the faithful discharge of their duties in such sums and with such sureties as the Board of Directors shall determine. The Assistant Treasurers and Assistant Secretaries, in general, shall perform such duties as shall be assigned to them by the Treasurer or the Secretary or by the President or the Board of Directors.

## ARTICLE VI COMMITTEES

*1. Committee of Directors:*

There shall be an Executive Committee, which shall include the President, and such other officers or members of the Board of Directors as may be designated by the Board of Directors. The Board of Directors may delegate to such Executive Committee any of the powers of the Board of Directors when the Board of Directors is not

in session; provided, however, that such delegation of authority to the Executive Committee shall not operate to relieve the Board of Directors, or any individual Director, of any responsibility imposed upon it or him by law.

#### *2. Other Committees:*

Other committees not having and exercising the authority of the Board of Directors in the management of the corporation may be appointed in any such manner as may be designated by a resolution adopted by a majority of the Directors present at a meeting at which a quorum is present. Unless otherwise provided in such resolution, members of such committees may be persons who are not members of the Board of Directors.

#### *3. Term of Office:*

The tenure of members of such committees shall be as provided by the Board of Directors in the resolution creating such committees.

#### *4. Quorum:*

Unless otherwise provided in the resolution of the Board of Directors designating a committee, a majority of the whole committee shall constitute a quorum and the act of a majority of the members present at a meeting at which a quorum is present shall be the act of the committee.

#### *5. Rules:*

Each committee may adopt rules for its own government not inconsistent with these By-Laws or with rules adopted by the Board of Directors.

### ARTICLE VII

#### EXECUTION OF INSTRUMENTS

##### *1. Execution of Instruments:*

The President shall have power to execute on behalf and in the name of the corporation any deed, contract, bond, debenture, note or other obligations or evidences of indebtedness, or proxy, or other instrument requiring the signature of an officer of the corporation, except where the signing and execution thereof shall be expressly delegated by the Board of Directors to some other officer or agent of the corporation. Unless so authorized, no officer, agent or employee shall have any power or authority to bind the corporation in any way, to pledge its credit, or to render it liable pecuniary for any purpose or in any amount.

##### *2. Checks and Endorsements:*

All checks and drafts upon the funds to the credit of the corporation in any of its deposi-

tories shall be signed by such of its officers or agents as shall from time to time be determined by resolution of the Board of Directors which may provide for the use of facsimile signatures under specified conditions, and all notes, bills receivable, trade acceptances, drafts, and other evidences of indebtedness payable to the corporation shall, for the purpose of deposit, discount or collection, be endorsed by such officers or agents of the corporation or in such manner as shall from time to time be determined by resolution of the Board of Directors. In the absence of such determination by the Board of Directors, such instruments shall be signed by the Treasurer or an Assistant Treasurer and countersigned by the President or a Vice-President of the corporation.

#### *3. Deposits:*

All funds of the corporation shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositories as the Board of Directors may select.

#### *4. Gifts:*

The Board of Directors may accept on behalf of the corporation any contribution, gift, bequest or devise for the general purpose or for any special purpose of the corporation.

### ARTICLE VIII

#### BOOKS AND RECORDS

The corporation shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its members, Board of Directors and committees having any of the authority of the Board of Directors, and shall keep at its registered or principal office a record giving the names and addresses of the members entitled to vote. All books and records of the corporation may be inspected by any member for any proper purpose at any reasonable time.

### ARTICLE IX

#### FISCAL YEAR

The fiscal year of the corporation shall begin on the first day of January, and end on the last day of December in each year.

### ARTICLE X

#### CORPORATE SEAL

The corporate seal shall be in such form as shall be approved by resolution of the Board of Directors. Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise. The impression of

the seal may be made and attested by either the Secretary or an Assistant Secretary for the authentication of contracts or other papers requiring the seal.

#### ARTICLE XI WAIVER OF NOTICE

Whenever any notice is required to be given to any member or director of this corporation under the provisions of the Arkansas Non-Profit Corporation Act or under the provisions of the Articles of Incorporation or by the By-Laws of the corporation, a waiver thereof in writing signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

#### ARTICLE XII AMENDMENTS TO BY-LAWS

These By-Laws may be amended at any annual meeting of the Corporate Members, or at any special meeting of the Corporate Members called for that purpose. These By-Laws may also be amended by the Board of Directors, by a vote of two-thirds of the total number of such Directors; provided, however, that the Directors shall not have the right to change or repeal any amendment hereto adopted by the Corporate Members. The Corporate Members shall have the right to amend or repeal any By-Law change made by the Board of Directors.

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#### ARKANSAS ACADEMY OF FAMILY PHYSICIANS

The Arkansas Academy of Family Physicians held its 25th Annual Scientific meeting in Little Rock in August.

The president of the American Academy of Family Physicians—Dr. Jerome Wildgen of Kalispell, Montana—attended the meeting and installed the new officers. Dr. Amail Chudy of North Little Rock will serve the Arkansas Academy as president for 1972-73. Dr. Kemal Kutait of Fort Smith is the immediate past president.

The Arkansas Academy now has about 300 members. There were approximately 150 registered for the annual meeting. Several members of the Arkansas Medical Society participated in the meeting program—Dr. Carie D. Buckley, Fayetteville; Dr. F. T. Fraunfelder, Little Rock; Dr. Jim Lytle, Batesville; Dr. Ed Wheat, Springdale;

Dr. Lowell Harris, Hope, Dr. Wayne B. Glenn, Little Rock; and Dr. Douglass Lowrey, Russellville.

The Academy has worked closely with the Family Practice Department of the University of Arkansas School of Medicine. There are now twenty physicians participating in the Family Practice program at the Medical Center. The goal of the program is to provide more family physicians for small towns in the State.

The American Academy of Family Physicians serves in an advisory capacity on production of the television program "Marcus Welby, M.D." which exemplifies the "Family Physician".

Family Practice board examinations are offered annually and consist of two days questioning covering all phases of medicine. Board certified Family Physicians must successfully complete re-examination every seven years to maintain certification. Those physicians certified by the Board during the initial three-year period will be "Charter Diplomates". The Family Practice Board feels that recertification will help keep physicians up-to-date and improve the quality of care which their patients receive.



Mrs. A. S. Koenig of Fort Smith, president-elect of the Woman's Auxiliary to the Arkansas Medical Society; Mrs. Purcell Smith, Mrs. Harold Langston and Mrs. C. S. Pool, all of Little Rock, were delegates to the Fiftieth Anniversary Convention of the Woman's Auxiliary to the American Medical Association which was held in San Francisco in June.



## PERSONAL AND NEWS ITEMS

### Physicians Re-elected

Dr. Charles E. Crawley of Forrest City, Dr. Lowell V. Ozment of Camden, Dr. George F. Wynne of Warren and Dr. Guy U. Robinson of Dunas have been re-elected to the American Academy of Family Physicians.

### Doctor Locates in McGehee

Dr. Robert L. Prosser began his practice of medicine in McGehee in early July. He will work along with Dr. Swan B. Moss at the Memorial Clinic in McGehee.

### Dr. Millard Honored

Dr. Roy I. Millard, co-founder of the Millard-Henry Clinic in Russellville, was honored at a July 7th retirement dinner given him by physicians of the Clinic. He retired in June 1971 following open heart surgery. A plaque of appreciation was presented to Dr. Millard by Dr. J. A. Henry, also a co-founder of the Millard-Henry Clinic.

### Dr. Tubb Locates in Springdale

Dr. Norman Tubb, a family physician, recently opened his office for the general practice of medicine at 1217 South Thompson in Springdale.

### Physician Returns to Little Rock

After completing a one year Fellowship in Pediatric Radiology at the Le Bonheur Children's Hospital in Memphis, Tennessee, Dr. James G. McKenzie returned to the staff of the University of Arkansas Medical Center. Prior to his Fellowship, he was Assistant Professor of Radiology at the Medical Center. Dr. McKenzie is the only Pediatric Radiologist in the State.

### Dr. Flack Elected to AAFP

Dr. James V. Flack of Little Rock has been elected to membership in the American Academy of Family Physicians.

### Physician Opens Office in Jonesboro

Dr. James W. Sanders has opened his office at 505 East Matthews in Jonesboro. He will specialize in general surgery.

### Former Arkansan Featured

Dr. Lillian Blackmon, a 1963 graduate of the University of Arkansas School of Medicine, was

featured in an article in the July issue of Reader's Digest. The article concerned a mobile intensive-care nursery operated by the Children's Hospital at San Francisco. Dr. Blackmon is a sister of Dr. James T. Blackmon of Arkadelphia.

### New Physician for Rogers

Dr. Tom J. Burton has opened his office, for the general practice of medicine, at 2306 Beacon Circle Drive in Rogers.

### Physician Assigned to Lake Village Area

Dr. Howard S. Henjyoji of Portland, Oregon, has been assigned to the Lake Village area by the National Health Service Corps (NHSC). Dr. Henjyoji's assignment to Lake Village is the result of an application to the National Health Service Corps by Chicot Memorial Hospital. NHSC is a program of the Department of Health, Education and Welfare and is charged with the responsibility of providing primary health care services to remote rural areas as well as to overcrowded inner cities.

### Dr. Hickman Closes Office

Dr. James L. Hickman has closed his office in Walnut Ridge in order to return to the University of Arkansas Medical Center in Little Rock for specialty training.

### New Medical Facility Planned for Fayetteville

Construction on a new, nine-story medical office and parking facility building is scheduled to begin in March 1973 in Fayetteville. The new building, to be called the Fayetteville Medical Tower, will be located immediately southeast of the Washington General Hospital and the Veterans Administration Hospital. The building will have five floors of parking and four floors of office space. It will be large enough to accommodate doctors' offices, outpatient facilities, medical education programs, public health agencies and other health-related agencies.

### Dr. Goldstein Oldest Student at College

Dr. Davis W. Goldstein, a retired dermatologist, is a student at Westark Community College in Fort Smith. At age eighty-three, he is the oldest student enrolled in the College.

**Dr. Chudy Appointed**

Governor Dale Bumpers has appointed Dr. Amail Chudy of North Little Rock to represent the Arkansas Medical Society on the Advisory Commission for the Arkansas Drug Abuse Authority. Dr. Roger Bost, Director of the Department of Social and Rehabilitative Services for the State of Arkansas, will serve as chairman of the Commission.

**Dumas Physician Joins Navy**

Dr. O. G. Blackwell has given up his practice in Dumas in order to enter the United States Navy. For the past several years, Dr. Blackwell was associated with the late Dr. Albert Lazenby at the Lazenby-Blackwell Clinic in Dumas.

**Dr. Ransom Announces New Associate**

Dr. G. E. Ransom, Jr., has announced that Dr. Clarence W. Koch, Jr., is now associated with

him as a family practitioner at 607 Woodruff in Searcy.

**Physician Joins Conway Medical Group**

Dr. William Furlow has joined the Conway Medical Group in Conway. Other doctors in the group are Dr. Robert L. Clark, Dr. Joel Mills, and Dr. Bob G. Smith. Dr. Furlow, who recently completed a Fellowship in cardiology at the University Medical Center in Little Rock, will be a member of the Conway Memorial Hospital staff and will be in charge of the new coronary care unit at the hospital.

**Physicians Certified**

Drs. Kemal Kutait and Kenneth E. Lilly of Fort Smith have been certified by the American Board of Family Practice. Dr. Kutait is immediate past president of the Arkansas Academy of Family Physicians and Dr. Lilly served the group during the last year as a Director.

**Dr. William M. Williams, Jr.**

Dr. William M. Williams, Jr., has been accepted for membership in the Pope-Yell County Medical Society. He is a native of Delight, Arkansas. He received his pre-medical education at Ouachita Baptist College and his medical education at the University of Arkansas School of Medicine, graduating in 1951 and 1955, respectively. He interned at St. Francis Hospital, Wichita, Kansas, 1955-56, and was in hospital general practice in Middlesboro, Kentucky, 1956-57. He completed his residency work in Obstetrics and Gynecology at the University of Missouri Medical Center, Columbia, Missouri, in 1960. Dr. Williams was in private practice for

eleven and one-half years in Denton, Texas. During 1971-72, he was affiliated with the Harris Hospital Medical Center in Fort Worth, Texas. Dr. Williams is associated with the Millard-Henry Clinic in Russellville, where he specializes in Obstetrics and Gynecology.

**Insulin Allergy and Insulin Resistance**

J. Dolovich et al (State Univ of New York, Buffalo 14214)

*J Allerg* 46:126-131 (Sept) 1970

A woman with adult-onset diabetes is described who received insulin therapy a second time. Shortly thereafter she developed generalized allergic reactions to insulin, followed by a period of insulin resistance during which allergic reactions were no longer present. Insulin therapy was stopped, and seven months later small doses of insulin resulted in generalized urticaria and angio-edema. Antibodies to bovine insulin of the IgG, IgA, IgM, and IgE classes and Prausnitz-Küstner antibody activity to bovine insulin were present. IgE antibody seems to be responsible for the allergic manifestations and IgG antibody for producing a protective or "blocking antibody" effect.



## OBITUARY

### Dr. Wallis A. Ross

Dr. Wallis A. Ross of Arkadelphia died June 29, 1972. He was born in Okolona, Arkansas, June 6, 1917.

He was graduated from Henderson State Teachers College in 1939 and from the University of Arkansas School of Medicine in 1943. He completed his postgraduate work at St. Paul's Hospital in Dallas, Texas. Dr. Ross was in the practice of medicine in Arkadelphia for twenty-five years, establishing his practice there in 1947 following his release from service in the United States Army.

Dr. Ross was a member of the Arkansas Medical Society, the American Medical Association, the Clark County Medical Society, the American Academy, and the Arkansas Academy of Family Physicians. He was a member of the First United Methodist Church, where he served on the Board of Stewards and was a trustee of the church. He was an active worker in the Boy Scouts of America.

Dr. Ross is survived by his wife, Mrs. Kitty Robertson Ross, two sons, one daughter, his mother, one grandchild, and two sisters.

\* \* \*

### Dr. Floyd S. Dozier

Dr. Floyd S. Dozier of Marianna died June 7, 1972, at the age of sixty-nine. He was a native of Moro, Arkansas.

Dr. Dozier was graduated from the University of Tennessee College of Medicine, Memphis, Tennessee, in 1928. He had practiced in Marianna for the past twenty-five years. Prior to his practice in Marianna, he was in practice in Marvell.

Dr. Dozier served in the United States Army during World War II and was in charge of Preventive Medicine of the Eastern Base Section of the European Theater of Operations (ETO).

He was a member of the Arkansas Medical Society, the American Medical Association, and served as secretary of the Lee County Medical Society. He was past vice president of the Mid-South Medical Association and a member of the Arkansas State Commission on Health. He was

a member of the Executive Board of the Arkansas Cancer Society and served as president of the Lee County Unit for the past two years.

He was a Deacon in the First Baptist Church; a member and past president of the Marianna Rotary Club; a member of the American Legion, and a 32nd Degree Mason.

Dr. Dozier is survived by his wife, Mrs. Irene Dozier, three brothers and two sisters.

\* \* \* \*

## RESOLUTIONS



### Floyd S. Dozier, M.D.

WHEREAS, Death has claimed Floyd S. Dozier, M.D., of Marianna, who has served as a volunteer of the Arkansas Division of the American Cancer Society for a number of years, and

WHEREAS, Dr. Dozier, as a member of the Lee County Unit, has worked tirelessly in the Unit's activities serving as Unit President for the past two years, and assisting in raising funds to support the Research, Education and Service Programs of the Society, and

WHEREAS, Dr. Dozier, as a member of the Division Board of Directors, has assisted at the Division level in formulating and directing the Society's programs, and

WHEREAS, By contributing his time and ability to the Cancer Control Program in Arkansas, Dr. Dozier has greatly assisted the Division in broadening and expanding its efforts, particularly in working with the Lee County Unit as President and Medical Advisor,

THEREFORE, BE IT RESOLVED, That the Board of Directors of the American Cancer Society, Arkansas Division, Inc., pay its respects to his memory and express its appreciation for his contribution to the Cancer Control Program, and

BE IT FURTHER RESOLVED, That these sentiments of the Board of Directors be transmitted to members of Dr. Dozier's family, with our deepest condolences, and that this Resolution be recorded and placed in the permanent records of the American Cancer Society, Arkansas Division, Inc.

Adopted July 1972  
Board of Directors  
Arkansas Division, Inc.  
American Cancer Society

# THINGS TO COME

## Coronary Care Courses Offered

The University of Arkansas Medical Center and the Arkansas Regional Medical Program will be presenting the basic course in Coronary Care for physicians (Dr. Davis' five day course) in the fall of 1972. Any interested physicians may contact the Department of Continuing Education.

Physicians interested in attending a one or two day seminar in Coronary Care this fall may also contact the University of Arkansas Medical Center, Department of Continuing Education, specifying either basic or advanced course.

## Physicians-Nurses Meeting Date Set

There will be a dinner meeting of nurses and physicians at 6:30 P.M. on Tuesday, October 17th, at the Ramada Inn, Jonesboro, Arkansas. All physicians and nurses are invited, especially those in the Jonesboro area. This is the annual "Rap Session" of the Arkansas State Nurses Association and the Arkansas Medical Society. The subject will be "Expanded Role for Nurses as Physician Assistants," and/or other subjects. The dinner will be Dutch treat. For dinner reservations, please write: Arkansas State Nurses Association, 117 South Cedar, Little Rock, Arkansas 72205. Dr. C. Lewis Hyatt is Chairman of the Arkansas Medical Society's Committee on Liaison with the Nursing Profession; Dr. Elois Field is Chairman of the Arkansas State Nurses Association's Committee on Liaison with the Medical Profession.

massive bleeding from diverticular disease of the colon was evaluated in 22 patients studied prospectively. Twenty-six of the 28 acute bleeding episodes in these patients were arrested by the enema. The two patients who continued to bleed were treated by an immediate colectomy while elective colon resections were carried out in three patients after the acute bleed had been controlled by the barium. The only complication of the procedure was a laceration of the rectal mucosa by the enema tube in one patient. All 22 patients survived their bleeding episodes or operations. The probable mechanism is a tamponade of the bleeding site by the barium solution. Failure of the enema to control the bleeding suggests that the bleeding will not subside spontaneously and early operation should be undertaken with resection of all colon shown to contain diverticula.



## Erythropoietic Response of Dialyzed Patients to Testosterone Administration

J. R. Richardson, Jr., and M. B. Weinstein (VA Hosp, Miami, Fla 33101)

*Ann Intern Med* 73:403-407 (Sept) 1970

Fifteen patients on a program of maintenance dialysis were given courses of testosterone enanthate therapy in weekly doses of 400 to 600 mg intramuscularly for 5 to 44 weeks. Thirteen patients exhibited a mean increment in hematocrit (5.6%) red cell volume (353 ml), and red cell volume per kilogram body weight (4.4 ml/kg). The mean rate of plasma iron clearance increased (-36.7 min). In several individuals marked improvement in anemia occurred. Two iron-deficient patients failed to exhibit an erythropoietic response to testosterone. A satisfactory response followed iron replacement. Androgenic hormones may be useful in the treatment of patients with advanced renal failure who are adequately dialyzed, well nourished, and not iron-deficient. This treatment, in conjunction with other measures aimed toward amelioration of anemia, has eliminated transfusion requirements in most of the patients in this group.



## Therapeutic Barium Enema for Massive Diverticular Bleeding

J. T. Adams (260 Crittenden Blvd, Rochester, NY 14603)  
*Arch Surg* 101:457-460 (Oct) 1970  
The use of a barium enema for the control of

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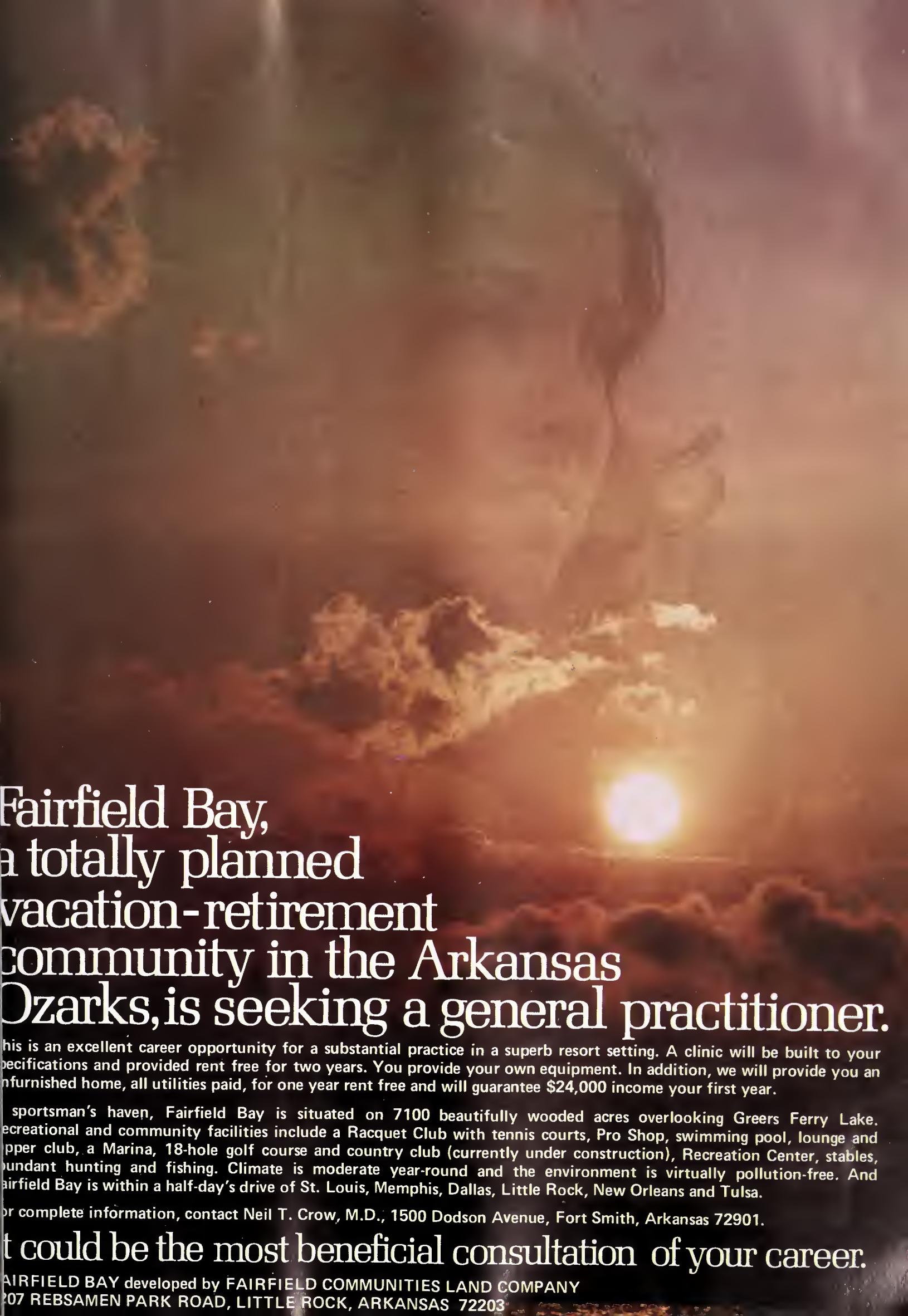
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# Carcinosarcoma of the Breast; Mammographic-Pathologic Correlation: A Case Report\*

E. B. Sherman, M.D.,\*\* W. C. Diner, M.D.,\*\*\* F. T. Caldwell, M.D.\*\*\*\*  
and J. H. Golleher, M.D.\*\*\*\*\*

## Abstract

A case of carcinosarcoma of the breast with mammographic and pathologic correlation is reported. The case is believed to represent the first report including mammographic description of this type of lesion. Histologic examination of subserial whole-breast sections revealed two distinct malignant components consisting of both carcinoma and sarcoma with admixture of the elements only at the interface. Mammographic and pathologic criteria are reviewed.

Carcinosarcoma is a rare malignant neoplasm of the female breast. The coexistence of both carcinoma and sarcoma within the same tumor has been variously described as adenocarcinoma with stromal metaplasia, mixed tumor, carcinoma with pseudosarcomatous changes and "collision tumors". Our preference for the term "carcinosarcoma" has descriptive merit and is selected to avoid any controversy surrounding the origin of the sarcomatous element.

The purpose of this report is to describe the mammographic characteristics and to correlate them with gross and histopathologic features.

The patient was one of a cumulative series comprising an on-going correlative pathologic-mammographic investigation. This project is a coordinated surgery, radiology, and pathology interdepartmental team approach to the study and management of diseases of the breast.

## CASE REPORT:

The patient is a 56 year old Caucasian woman who entered the University Medical Center, October, 1970, complaining of a small "lump" in the left breast. Discovered two months before admission by self-examination, the mass had rapidly more than doubled in size in the three weeks interval before admission.

She is gravida 5 para 4 and four years postmenopausal. An older living sister "had a breast removed for cancer" at 54 years of age.

Physical examination revealed a  $4 \times 4$  cm. firm mass in the inferior medial quadrant of the left breast. There was no fixation of the lesion to the chest wall; the overlying skin and nipple were clinically uninvolved. No axillary nodes could be palpated.

Routine laboratory examinations were within normal limits.

Mammograms of the left breast (Fig. 1) revealed a discrete lobulated mass in the lower medial quadrant within a generally fatty breast. The approximately rounded lesion measured  $2.5 \times 2.5 \times 3$  cm. with well-defined margins except anteriorly where a curvilinear tapered branching density extended into the adjacent fat (Comet's tail sign). In comparison to the irregular posterior-superior margins, the anterior-inferior aspect was smoother and more rounded. No calcification could be identified. A small amount of residual breast tissue in both upper outer quadrants was recognized.

A Vim Silverman needle biopsy of the breast mass confirmed the diagnosis of malignancy.

\*From the University of Arkansas Medical Center, Little Rock, Arkansas 72205.

\*\*Now with Memorial Medical Center, Savannah, Georgia.

\*\*\*Professor, Department of Radiology.

\*\*\*\*Professor, Department of Surgery.

\*\*\*\*\*Resident, Department of Pathology.

Supported by NIH General Research Support Grant 5S01FR5350.

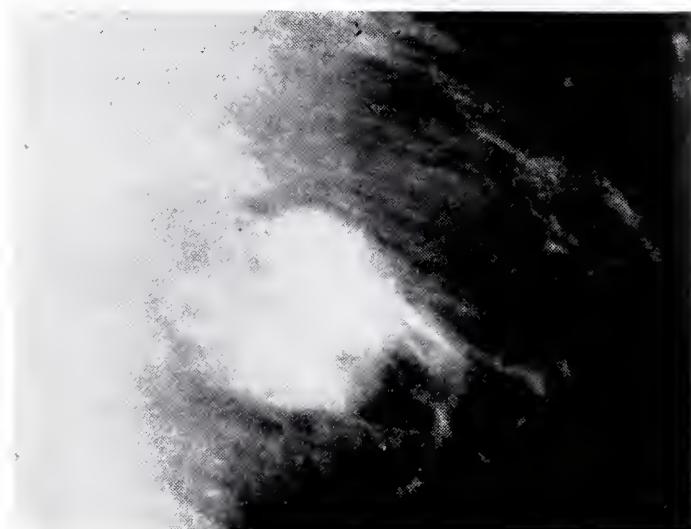


Figure 1  
Slightly magnified LogEtronic copy of original mammogram. Mediolateral view of tumor in inferior portion of left breast. Note curvilinear density extending from mass toward right of photograph. Black specks are processing artifacts.

Subsequently, a left radical mastectomy was performed. Her postoperative convalescence was uneventful.

#### PATHOLOGIC DESCRIPTION:

The medium sized fibrofatty left breast was entirely sectioned into 33 slices 0.5 cm in thickness and radiographic (Fig. 2). A  $2.3 \times 2.8 \times 3.0$  cm. firm lobulated mass with two fairly distinct components was located in the inferior medial quadrant. The superior portion had an irregular margin with dense firm bands projecting into the adjacent fat. This area was gray-white, hard and gritty. The inferior portion had a sharply rounded contour, was encapsulated, pale pink and fleshy in consistency. The entire centrally located mass involved neither the overlying skin nor the retro-mammary fascia.

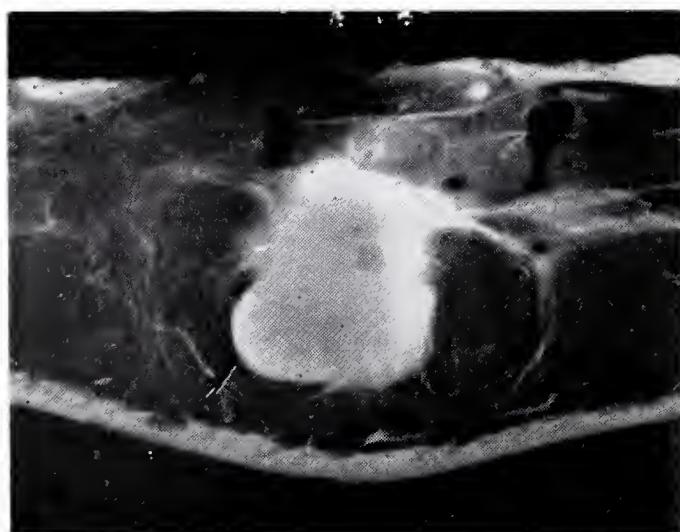


Figure 2  
Radiograph of slice section No. 13 showing tumor mass, oriented to correspond with mammogram, Figure 1. Smooth rounded inferior margin is sarcomatous element (arrow). Irregularly outlined portion is carcinoma with flecks of calcium.

Multiple  $4 \times 6$  cm. sub-serial paraffin-embedded microscopic sections of the whole breast slices revealed two malignant components which corresponded to the previously described gross specimen (Fig. 3).

The irregular spiculated superior segment of the tumor mass was composed of neoplastic infiltrating duct cells within dense uniformly desmoplastic stroma. Lymphocytes and plasma cells were present in abundance (Fig. 4). Nodular areas of solid intraduct carcinoma alternated with foci showing comedo-like patterns with intraluminal detritus and calcification. Admixed with these small hyperchromatic duct cells were islands of malignant squamous cells (Fig. 5). A single nest of squamous carcinoma was totally isolated and surrounded by sarcomatous stroma.

Transition from uniformly dense fibrocollagenous stroma to loose sarcomatous elements, while not sharply demarcated, appeared fairly abrupt. No obvious infiltration of malignant epithelial cells at the interface was appreciated. The fleshy, rounded portion of the mass was



Figure 3  
Whole mount breast section corresponding to radiograph in Figure 2. Rounded, pale tumor projection below, sarcoma (curved arrow). Darker tumor area, carcinoma (straight arrow). Small black dot in upper right is an intramammary lymph node.

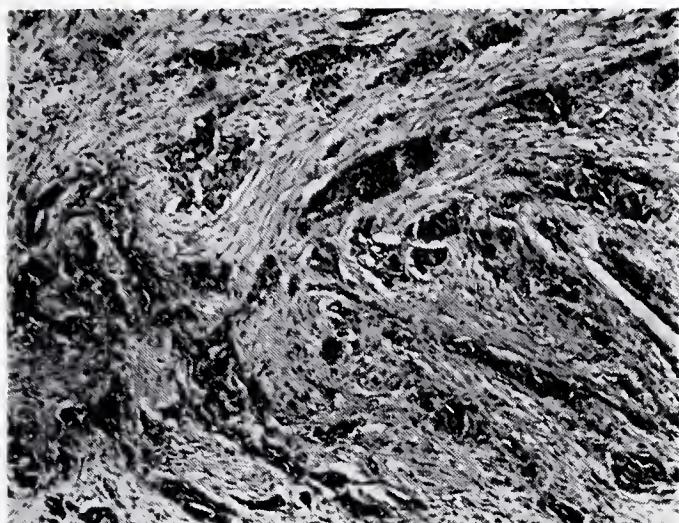


Figure 4  
Photomicrograph showing typical infiltrating duct carcinoma with benign reactive stroma. (H & E x 100)

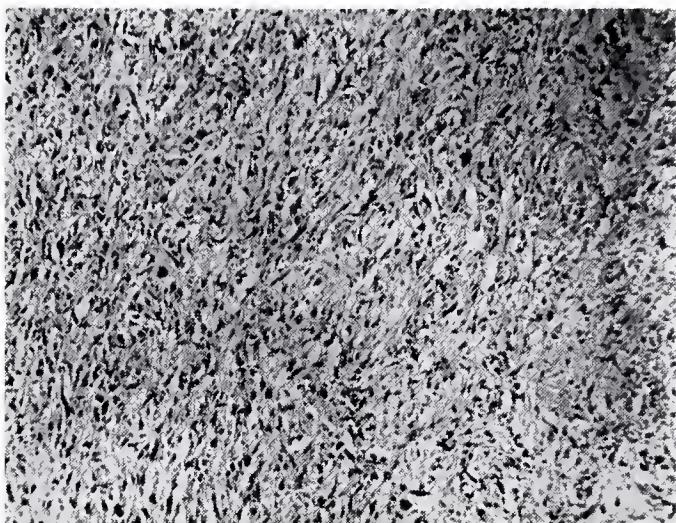


Figure 6  
Photomicrograph of sarcoma illustrating bizarre elongated and stellate cells. (H & E x 100).

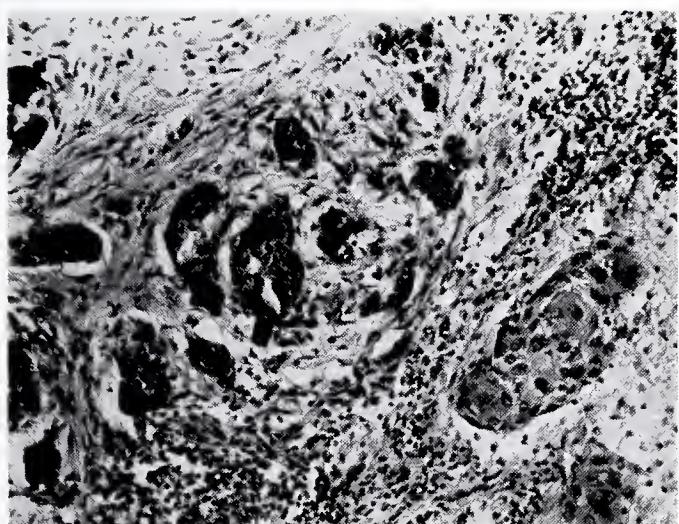


Figure 5  
Photomicrograph illustrating infiltrating duct cells (above, left) and malignant squamous component (below, right). Note benign stroma with lymphocytic reaction. (H & E x 100).

composed predominantly of spindle and stellate cells (Fig. 6) which stained positively for collagen fibrils and smooth muscle with Masson's trichrome stain. There was no osseous or cartilagenous metaplasia. Differential staining procedures indicate that almost the entire spectrum of sarcomatous elements were represented but was predominantly fibrosarcoma.

One intramammary and twenty-nine axillary lymph nodes were negative for metastatic tumor.

## DISCUSSION

Carcinosarcoma with component cellular elements admixed into a single tumor occurs infrequently in the female breast. Robb and MacFarland<sup>1</sup> reviewed all reported series and cases to 1958, accepting 14 cases, adding two of their own, as true examples of carcinoma and sarcoma

in the same breast lesion. In 1958, Botham<sup>2</sup> described nine additional cases; William<sup>3</sup> and Knutty<sup>4</sup>, one each. Sandozi<sup>5</sup> reported a case of carcinosarcoma in the breast of a three year old male child in 1968. In 1969, Chandler<sup>6</sup> reported the 28th case of carcinosarcoma in a patient who expired 18 months following radical mastectomy; post-mortem examination of metastases to the lung and mediastinum were morphologically identical to the sarcomatous element of the primary breast tumor with no carcinomatous component.

To the best of our knowledge, the patient herein reported is the first to appear in the English literature with mammographic-pathologic correlation; in fact, no cases of sarcoma or carcinosarcoma could be found in the mammographic literature. Consequently, no characteristic descriptions of these conditions have evolved.

Mammograms of our patient were not pathognomonic for the nature of the lesion. However, because of the mammographic appearance of this tumor, as well as the typical roentgenologic appearance of sarcomatous nodules occurring elsewhere, smooth rounded tumor margins with a suggestion of encapsulation should alert the radiologist and the pathologist to consider the possible presence of sarcoma. Whole breast slice sections and gross morphology, in retrospect, were suspicious for, although not diagnostic of an unusual atypical lesion.

Histologically, the squamous metaplastic variant, as described by McDivitt, et. al.<sup>7</sup>, could presumably have become transformed into a pseudo-

sarcomatous spindle and giant cell pattern. However, multiple sections failed to disclose any deviation from the usual ductal arrangement of epithelial cells. In all instances, where malignant duct and squamous cells penetrated into the stroma, the latter consisted of well differentiated benign fibrocytes. The sharply delineated sarcomatous component with admixture of malignant elements only at the interface suggests that this lesion originated from two distinct cell lineages, both epithelial and mesodermal.

The chance occurrence of a "collision tumor" cannot be entirely eliminated by this investigation.

1. Robb, P. M. and Mac Farlane, A.: Two Rare Breast Tumours. *J. Path. Bact.* 75: 293-298, 1958.
2. Botham, R. J., McDonald, J. R., and Clagett, O. T.:

Sarcoma of the Mammary Gland. *Surg. Gynec. Obstet.* 107: 55-61, 1958.

3. Williams, B. V. and Diamonon, J.: Carcinosarcoma of the Breast. *Southern Med. J.* 57:462-464, 1964.
4. Knutty, M. K. and Sreedharan, T.: Carcinosarcoma; A Case Report with Review of the Literature. *Indian J. Med. Sci.* 19: 307-309, 1965.
5. Sandozi, M. K., Maitra, A. K., Anees, A. M., and Vithal, P. V.: Carcinosarcoma of the Breast in a Male Child. *Indian J. Path. Bact.* 11: 126-130, 1968.
6. Chandler, J. J., Crisera, R. V., and Fletcher, W. S.: Coley's Toxins and Chemotherapy in Treatment of Breast Carcinosarcoma: Case Report. *Amer. Surg.* 35: 377-383, 1969.
7. McDivitt, R. W., Stewart, F. W., and Berg, J. W.: Tumors of the Breast. *Atlas of Tumor Pathology*, second series, fasc. 2. Washington, D. C. Armed Forces Institute of Pathology, 1968, pp. 94-100.



### Zinc Metabolism in Renal Failure

C. J. Condon and R. M. Freeman (Dept of Medicine, Univ of Iowa, Iowa City 52240)  
*Ann Intern Med* 73:531-536 (Oct) 1970

Manifestations of zinc deficiency include abnormal bone metabolism, skin lesions, testicular atrophy, and impaired wound healing. Because these abnormalities are also common in uremia, zinc metabolism in renal insufficiency was studied. Blood, urine and hair were collected from 42 male subjects, including 10 dialysis patients, 21 nondialyzed uremic patients, and 11 controls. Postmortem tissues (heart, liver, kidney, and testes) from patients who died of uremia were also analyzed. Plasma zinc was below normal in 21 of 31 patients. Zinc content of hair, heart, liver, and testes was normal. To measure the effect of acute uremia on zinc metabolism, plasma zinc in rats was measured 24 hours after ureteral ligation. Despite low plasma zinc levels there was no tissue deficit of zinc in hair, heart, liver, or testes of patients with chronic renal failure. Decreased plasma zinc can be demonstrated experimentally in uremic rats in the absence of zinc deficiency. Decreased plasma zinc in renal insufficiency may be due to redistribution rather than to total body deficiency.

### Benign and Malignant Breast Diseases in South Wales: Study of Urinary Steroids

E.H.D. Cameron et al (Tenovus Institute for Cancer Research, Welsh National School of Medicine, Cardiff, Wales)  
*Brit Med J* 4:768-771 (Dec 26) 1970

Urinary Excretion of 11-deoxy-17-oxosteroids and 17-hydroxycorticosteroids was determined in 21 normal women, in 63 with benign breast disease and in 93 with malignant breast disease. The malignant group was subdivided into those with primary (30), advanced localized (21) and advanced generalized (42) disease. Excretion of etiocholanolone in the advanced group as a whole was different from the rest and this was statistically significant in the case of the benign and primary groups. Detailed statistical analysis relating etiocholanolone excretion and age showed that a common regression coefficient could be used for all groups. Furthermore, women with advanced localized disease were isolated as the group which excreted significantly lower levels of etiocholanolone. Similar results were observed with respect to androsterone excretion in the same patients but detailed statistical analysis failed to reveal any difference in the 17-hydroxycortico-steroid excretion between the various groups.

# Diagnosis and Treatment of the Ills of a Medical School\*

James L. Dennis, M.D.\*\*

When a physician faces a patient who is sorely troubled—especially when that patient is one for whom he has deep affection—he must discipline himself to avoid wishful thinking as he seeks the objectivity of truth. We will face such a patient today. To understand that patient's problems, we will first have to understand ourselves.

I have never known an ethical physician who did not love his profession. The fountainhead source of all physicians is the medical school. It is as pathological for a physician to intensely dislike his alma mater as it is for a son to hate his mother. It is equally pathological for a mother figure to scorn the feelings of her children. When an offspring rejects his mother it may be as benign as the temporary rebellion of the adolescent, where time and patience will gradually close the generation gap, or, on the other hand, there are other types of rebellions and rejections that can emerge as a destructive force. When this occurs the youngster may be the most obviously disturbed, but the genesis of his problems can nearly always be traced to the behavior patterns of his "mater."

The profession of medicine is troubled. Many practitioners are rightfully fearful and depressed about the possibilities of an eventual control of medical practice by an encompassing government, but medical educators are also beginning to realize the threat of this potentially lethal dilemma. Social and political forces are exerting extreme pressures on us to double and triple the production of physicians. While we are committed to expanding our student body at the UAMC, the numbers game can be both expensive and ineffective. I honestly believe that if I could place 50 to 100 physicians in the right areas in Arkansas we would not have any person who did not have reasonable access to health care. The kinds of products we produce in medicine and where they go to live are the gut problems remaining to be solved—vastly increasing the numbers produced will only increase the costs unless

we address the issues of kinds and sites of practice. All in medicine and in government need to understand this.

I have come to know many of you fairly well and I have come to know many of our faculty well. I find all to be sincere gentlemen and ladies of good will, who are deeply committed to what each think is a correct position. At each end of the spectrum we find some who tend to have become too overtly concerned with territorial imperatives and others who may be far more righteous than right—(The Good Book says, "You can change the sinner, but there is no hope to change the righteous"). If we look beyond the extremes of positions and territories we find that all of us do have a common mission. I think you can all agree that our mission is to serve our fellow man. In a pragmatic sense, the medical school's mission is to produce the kinds as well as the numbers of physicians required to meet the medical needs of our people. The practicing physician's mission is to serve the health needs and to relieve the suffering of the individuals in our society who are his patients. When we visualize these goals, it is obvious that they converge and in a final analysis are mutual and interdependent.

In the beginning we all started at the same place, our medical school, and in the end we all seek the same goal, i.e., to serve our fellow man. What happens to us between these points of departure and destination? Let's get together as the professional brothers we are.

If we are going to generate a renewal of a unified spirit of professional mission we might start with the transactional analyst's simple concept of "I'm O.K.—You're O.K." If you mean it and I mean it, when we say, "I'm O.K.—You're O.K." we can communicate. I do not know how you feel, but I think you are O.K.

O.K.! I am going to present the University of Arkansas Medical Center's School of Medicine to you as a clinical case presentation—as a patient presented from the viewpoint of the concerned and responsible family physician.

\*Presented at the 96th Annual Session, Arkansas Medical Society, April 24, 1972.

\*\*Vice President for Health Sciences, University of Arkansas Medical Center, Little Rock, Arkansas 72205.

**CASE PRESENTATION:**

I was re-introduced to the problems of Ms. UAMC in September, 1970. This 92 year old patient is called "Alma Mater" by most of the doctors in Arkansas. She is housed in a large brick home, high on a hill. The exterior is imposing and appears to be quite modern, but once inside it is dimly lighted and much of the equipment appears to be from a past decade. The patient gets nervous and defensive when questions are raised concerning her personal problems.

**CHIEF COMPLAINT:**

Fatigue, anxiety, loneliness and a sense of having been abandoned by her progeny and her parent community, compounded by a constant worry about the finances required to provide care for the many who seek her help.

**PRESENT ILLNESS:**

The PI appears to have had its onset about 15-16 years ago, soon after Alma Mater had moved into her outwardly pretentious new home. She quickly observed that there had not been enough funds to complete and furnish it. One third of the "bedrooms" (patient care units) did not have beds in them and now have long ago been converted to new programs such as coronary care unit, transplant unit, etc. Because of the "limited funds" when built, there had been skimping on the wiring; electrical outlets were not sparkproof and the floors in her operating rooms were not conductive. Some of the elevators had never been installed, the building site was too small to accommodate all of the cars of her boarders, students and employees—much less those of all of the many patients and visitors. Although initially planned as just a medical school and a teaching hospital it had been decided after the plans had been completed to include a school of pharmacy and a school of nursing. These were assigned two floors of the education wing, which floors were then designated as "schools." Many people who saw the large structure thought of it as either being one huge medical school, or, according to their orientation, others considered it as just one big hospital. Alma Mater observed that it is actually an entire university campus for the health sciences which has been "stacked" into a monolithic structure—rather than a campus with separate identifiable, functional units as seen on most

such campuses. As a result many people erroneously believed, and still believe, that her "house" was overbuilt, when in reality it was and is in many respects, including space, quite inadequate. If the various schools and the hospital were free-standing, each would look more like the proverbial little red school house than a major professional college.

The hospital is operating 300 beds which are still expected by some to service the charity load of an entire state. Paradoxically, it is much smaller than either of the local community hospitals. On the basis of population, a hospital providing for the total charity needs of the state would require 2,500 to 3,000 beds. Because of demands and limitations, Alma Mater's hospital beds are frequently filled and she has to say "No room in the inn" to so many that some physicians and legislators become frustrated and angry. She seems to be very hurt by the lack of understanding about this fundamental frustration and the persistent image of the University Hospital as an "indigent and charity" institution for the entire State has become a cross to bear. Although her hospital was a number of years ago designated by statute as, "the teaching hospital of the University" there are few opportunities for meaningful contacts with the average citizen, much less the more influential and affluent citizens of Arkansas, many of whom regard the hospital as a place where their tax dollars are siphoned off to support welfare patients. More specifically, if they live in the counties outside of Pulaski County, they view their tax dollars going to Little Rock to take care of Pulaski County's indigent care responsibilities. In Eastern Arkansas it has been stated that 90 percent of the patients admitted are black. Actually, 62 percent are white and more than half come from the 74 counties in the State other than Pulaski County.

Our patient constantly worries about the fact that her hospital unit is surrounded on one side by student teaching laboratories and on the other side by research laboratories; circumstances that vastly increase the potentials for explosions and fire hazards—much greater than any hospital should have.

After expressing her sleepless worry about the inadequacies of the physical plant, Alma Mater seemed to relax a bit and she began to reveal some of her deeper feelings. While concerned

about the deficiencies of "things" she was really more worried about people and their attitudes. She says that the limitations of facilities and equipment has led to constant "gripping" and "poor-mouthing" by those who live and work in her house. This affects student and patient attitudes. After ventilating this feeling she rather painfully acknowledged that her difficulties in getting professional support began when she moved into the new building and the voluntary medical school clinical faculty was converted to that of full time specialist faculty appointments. Apparently this change over was not handled too tactfully by a "transient" former dean, "who was just not our kind of people." Although that dean has been gone for more than a decade, some of Alma Mater's offspring still condemn the medical school for many of his actions. What was at first an acute (town-gown) sibling rivalry developed the symptoms of a debilitating statewide chronic town-gown syndrome. Alma Mater is very sad about the alienation of so many of her "boys" whom she had nurtured and watched with pride as they developed and went out into practice on their own.

Alma Mater grieves about the fact that even during her times of greatest need that many of her offspring (physicians she has produced) not only reject her but a few sometimes even attack her. She observes that nearly all have been successful, yet they have been providing gifts to Alma Mater that average out between \$5 and \$10 per alumnus each year.

She recalls that the full time faculty for the medical school emerged concurrently with the explosion of biomedical scientific knowledge and technology. Federal funds began to pour out of the National Institutes of Health for the support of categorical research efforts, a factor that permitted a scientifically oriented faculty to passively and almost subconsciously withdraw from the confrontation of issues relating to state community medical needs. Furthermore, by generating their own funds many faculty became relatively independent of much of the local and administrative controls; they looked to Washington rather than to Arkansas for support. As a result the changes that took place more nearly reflected the guidelines of the Federal government than any consciously planned change by medical educators. Medical science certainly did advance, but at the

expense of communication with the parent community. Publicized medical advances accelerated the expectations of the public. These things happened at the same time large areas of deficits were developing in the health care delivery system and for social and economic reasons that were actually unrelated to medical education.

A whole series of complex factors has slowly generated a growing coolness toward medical education. With the advancements in science and technology, specialization was an inevitable consequence. At the same time the great shift in population from rural to urban communities, combined with a decline in the production of generalists and family practitioners left most rural areas decimated in terms of their ability to attract and hold new physicians. Rural citizens who no longer had family doctors began to complain to their "family legislators." Many citizens, political groups and even many physicians began to attribute all the deficits in the health care system to trends in medical education and the medical school was increasingly criticized for over-emphasizing specialization, down-grading family medicine and for devoting too much of its energies to research instead of teaching. These statements oversimplify a very complex matter, but because of partial truth the fact remains that such beliefs and attitudes exist and are widespread. Alma Mater observes that the shortage of physicians and the apparent lack of relevancy of medical training to societal needs have provided a cause celebre for activists on both the far left and the far right. Liberals have long held hopes for a national health service; hence, the deficits in health care plus the divisiveness in the medical profession have provided an open invitation for the political exploitation of medicine. Any time any section of medicine is subjected to more governmental controls we all lose and none more than the patient.

Obviously hesitant our patient speaks guardedly and respectfully of her own "Mater" in Fayetteville. She observes that most of her own medical students did not go to undergraduate school at Fayetteville; hence, do not always understand and are not always sympathetic to that relationship. They tend to be reserved about the grand old matriarch whom they feel is not as understanding and supportive of the needs of the medical school as she could be.

Finally, Alma Mater confesses that she recognizes the necessity to straighten out her own internal affairs and to mend her relations within the statewide family. Everything she plans for the future must now relate to the needs of the people of Arkansas. She knows she has to earn the support that must be forthcoming but is anxious to do it. *DIAGNOSTIC IMPRESSIONS* include (1) parent community deprivation syndrome, (2) depression due to latent sibling rivalry, (3) malnutrition, created by excessive public demands on the one hand and limited resources for intake on the other hand, (4) isolation, loneliness, withdrawal, neurotic and somewhat paranoid feelings, and (5) inability to perform up to the levels of increasing public expectations without the tender loving care and affectionate support of her talented progeny and the people of Arkansas.

#### **PROGNOSIS:**

The prognosis is excellent. This lovely old lady has probably produced more really fine professional offspring, with fewer resources, than any one else in this country. She has great, untapped potentials. She has gained the insight she

needs to fulfill her responsibility to her people and has developed plans to produce the kinds as well as the numbers of physicians needed in Arkansas. Most of her current faculty have recognized her need to change and most are ready to join with their colleagues in practice for whatever programs may be necessary to voluntarily meet the needs of our State. Alma Mater says, "This is the way and the only way that practicing physicians and academic physicians are going to preserve their professional freedoms."

#### **TREATMENT:**

Like all patients who have attitudinal problems, Alma Mater will, in a sense, have to cure herself—but such a cure requires help. She needs firm but empathetic guidance until she regains her perspectives with a sense of being wanted. This will be accomplished when she is able to better and more sensitively and more appropriately respond to what her offspring and parent state community needs and wants. Thus, we will strive to create a virtuous circle of mutuality in which Alma Mater, through her "offspring", can fulfill her mission to society.



#### **Mycotic Aneurysms**

M. M. Cliff (3401 N Broad St, Philadelphia 19140), R. L. Soulen, and A. J. Finestone  
*Arch Intern Med* 126:977-982 (Dec) 1970

A review of records of the past ten years at Temple University Hospital, Philadelphia, yielded 11 mycotic aneurysms in eight patients. Despite antibiotics, mycotic aneurysms remain an infrequent but serious threat to health and often to life. No age, sex, or anatomic part is immune. Bacterial endocarditis and atheromatous disease both increase vulnerability to these lesions. The clinical presentation of mycotic aneurysms may be subtle or may give dramatic evidence of hitherto unrecognized underlying disease. Angiography readily demonstrates the aneurysms, confirms the diagnosis and guides the surgeon. Extirpation of the aneurysms is necessary for cure. Placement of a prosthesis into an infected bed is unsatisfactory. Preoperative angiography is prudent in any patient with a mediastinal mass which cannot be radiologically separated from the heart.

#### **Diabetes Mellitus and Pernicious Anemia**

C. Munichoodappa and G. P. Kozak (Joslin Clinic, Boston 02109)  
*Diabetes* 19:719-723 (Oct) 1970

To determine the frequency of the association of diabetes mellitus (DM) and pernicious anemia (PA), patients with this diagnosis in a ten-year period were studied. In 11,144 diabetic patients, PA was noted in 36 (incidence of 3.2/1,000). Only one patient was insulin-dependent. There were 21 women and 15 men and ages ranged from 34 to 81 years. Twenty-eight patients had DM for a mean period of 12.6 years before the development of PA. In eight, PA preceded DM by a mean period of 6.6 years. Vitamin B<sub>12</sub> deficiency neuropathy was present in nine patients, but in only six of these was there clinically recognizable anemia. Hypothyroidism was present in two. The current observations and the immunological data available to date suggest that the autoimmunity may have a relevant part in their common pathogenesis.

# **Subcutaneous Mammmectomy**

## **New Hope for Benign Breast Disease**

Thomas H. Bill Allen, M.D.\*

Surgical advances in the treatment of breast disease have been centered on the treatment of malignant breast disease. Even in these areas, the surgical treatment has remained virtually unchanged since the original reports of Halsted and Meyer in 1882 and 1894 respectively. During these many years the treatment of benign breast disease has been almost completely ignored. It is sometimes puzzling that benign diseases of other areas, whether or not premalignant, are frequently not treated by limited extirpation of the diseased area, but by resection of the organ system causing the offending lesion. This is true in the treatment of peptic ulcer disease, gallstones and diseases of arteriosclerotic insufficiency to name a few. A concept of treatment based on elimination of the offending organ, therefore, seems pertinent in the treatment of benign breast disease.

Chronic cystic mastitis is the most common form of benign breast disease. Schwartz states that "patients who develop this complex early enough or severely enough to warrant biopsy do indeed represent a special group with a greater hazard of eventual cancer". He also states "Follow-up studies of patients shown by biopsy to have chronic cystic mastitis uniformly indicate that cancer subsequently occurs three to five times more often in these patients than in the general population".

Recently a new operative procedure has been devised, based on the foregoing concepts of surgical therapy. This operation is the bilateral subcutaneous mammectomy with bilateral breast reconstruction. In this procedure, the glandular breast tissue is removed while leaving the skin covering. The shape of the breast is then reconstructed using silastic mammary prostheses. In spite of isolated reports, this procedure should be used in the treatment of benign breast disease only.

The subcutaneous mammectomy is performed through a three inch incision placed in the submammary fold. Dissection is then carried in

the subcutaneous plane over the anterior surface of the glandular breast area. The presence of Cooper's ligaments indicate the area of dissection. Dissection superiorly on the pectoralis major fascia frees the posterior aspect of the glandular breast tissue. These anterior and posterior planes of dissection are then joined and the glandular breast is removed from the operative field. After meticulous hemostasis is accomplished, the operative field is fitted with a silastic mammary prosthesis which has been previously fitted for the individual patient. Further details of surgical procedure, which are not the purpose of this report, will not be discussed at this time.

This operation, which is performed primarily as a cancer preventative type of operation, also accomplishes secondarily an excellent cosmetic result. As can be seen in Figure I, the end result in appearance is quite satisfactory. Figure I shows



Figure I  
Two weeks after removal of breast tissue and reconstruction.

\*413 North University, Little Rock, Arkansas 72205.

a patient two weeks postoperatively.

In addition to the medical benefits of the new procedure, the psychological benefits have been impressive. It has been overlooked by many physicians that so many women live in constant, severe anxiety of submitting to an operative procedure for biopsy of a mass on a regular, sometimes yearly, basis. In these enlightened and informative times, most women are also aware of the increased incidence of carcinoma in a breast with benign disease.

It should be noted in any discussion of this procedure that patients are informed of the possibility of a radical mastectomy, should frozen section report show a malignant process. Strong emphasis should be made that the operation is

one for benign breast disease only. Careful history and physical examination along with a proved history of cystic mastitis, multiple fibro-adenomata or other documented benign disease remain essential in the selection of patients for this procedure.

In summary, a new operative procedure has been presented in the treatment of benign breast disease. A brief explanation of the surgical procedure, rationale of the treatment, guidelines for selection of patients, and the achievement of a secondary cosmetic result have been shown.

#### BIBLIOGRAPHY

1. Davis, H. H., Simons, M., and Davis, J. B.: Cystic Disease of the Breast. *Cancer*, 17:957, 1964.
2. Schwartz, S. I.: *Principles of Surgery*. McGraw-Hill, 1969.



#### **Chlorpropamide Hyponatremia: Drug-Induced Inappropriate ADH Activity**

P. N. Weissman, L. Shenkinan and R. I. Gregerman (Baltimore City Hosp, Baltimore 21224)

*New Eng J Med* 284:65-71 (Jan 14) 1971

Five patients who developed symptomatic hyponatremia, hypo-osmolality, and impaired water excretion while receiving chlorpropamide (Diabinese) therapy for diabetes mellitus were observed. Symptoms included nausea, vomiting, weakness and coma. Clinical and chemical abnormalities were corrected by withdrawal of chlorpropamide and reappeared when the drug was readministered. This phenomenon represents a drug-induced reversible form of the syndrome of inappropriate antidiuretic hormone activity, probably due to enhancement of hormone action by the drug. It may be hazardous for patients on chlorpropamide to be given increased water loads therapeutically (urinary tract infections) and those with impaired water tolerance (congestive heart failure) may also be at risk, but overtly excessive water intake is not necessary for development of the hyponatremic state. The syndrome was seen in 4% of patients receiving chlorpropamide in a clinic population. Considering this apparent incidence and the number of patients currently receiving chlorpropamide therapy, it is estimated that as many as several thousand persons in the US may currently be experiencing morbidity due to this cause.

#### **Effect of Heparin on Serum Free Fatty Acids, Plasma Catecholamine and Incidence of Arrhythmias Following Acute Myocardial Infarction**

P. G. Nelson (Royal Victoria Hosp, Grosvenor Rd, Belfast, Ireland)

*Brit Med J* 3:735-736 (Sept 26) 1970

This trial was designed to discover if heparin, by elevating serum free fatty acids (FFA), had an arrhythmogenic effect on patients with acute myocardial infarction. Twenty-four carefully matched patients with acute myocardial infarction were randomly allocated to receive either intravenous heparin or a placebo. Heparin produced a marked rise in FFA, maximal ten minutes after injection, but no concomitant increase in cardiac irritability. A plasma noradrenalin level obtained shortly after the onset of symptoms was found to be valuable in the prediction of patients liable to develop cardiac arrhythmias. Serum FFA and plasma adrenalin levels were not valuable in this respect. Plasma noradrenalin levels could be used to predict those patients who would most benefit from the continuous monitoring facilities of a coronary care unit. The relationship between plasma noradrenalin and the later development of cardiac arrhythmias following acute myocardial infarction suggests that the prophylactic use of a  $\beta$ -adrenergic blocking agent without negative inotropic properties might prevent arrhythmias in this clinical situation.

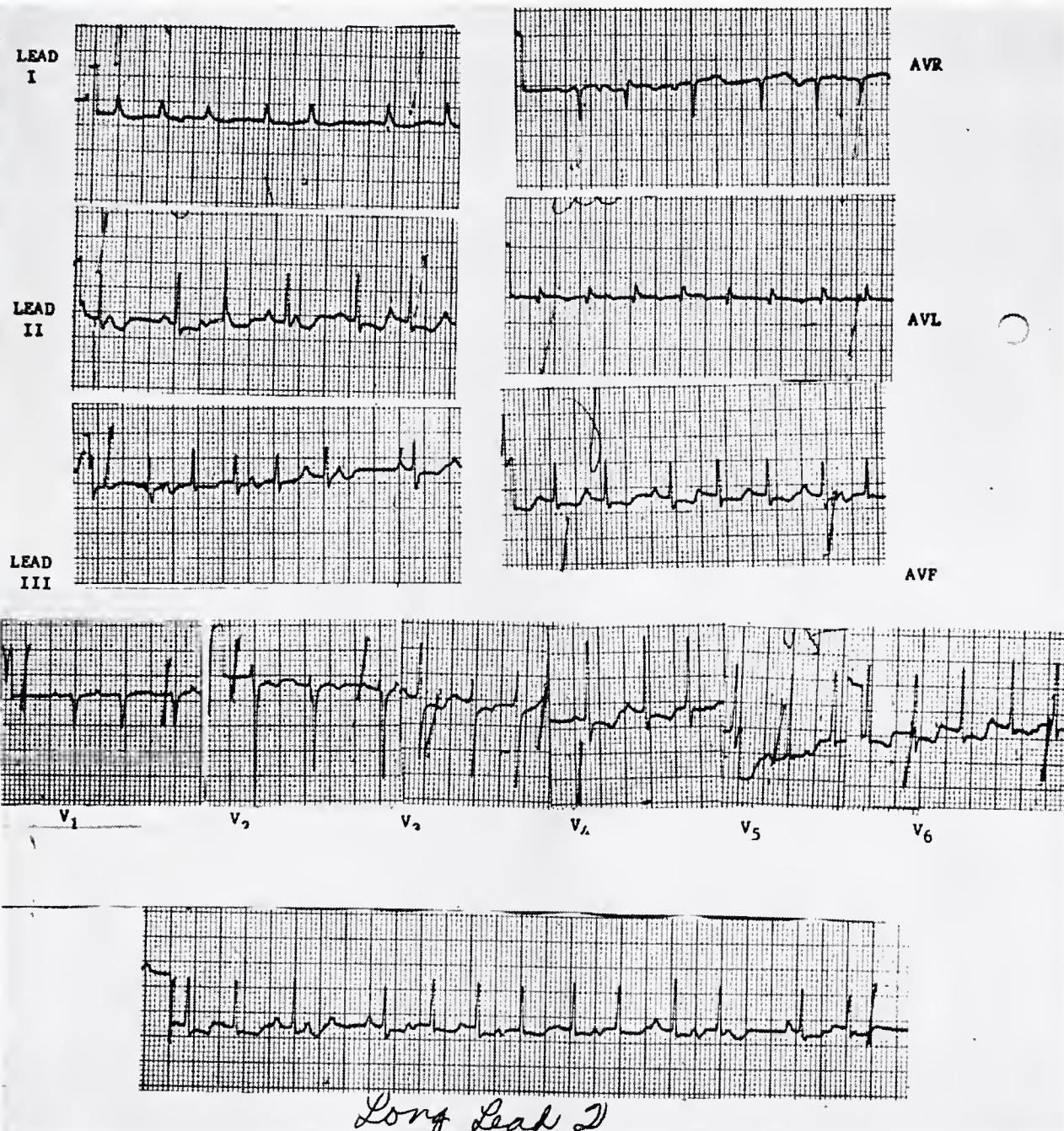
# ELECTROCARDIOGRAM

# OF THE MONTH



This trace is from an elderly Negro who was admitted to the UAMC with a femoral neck fracture; it could not be determined whether she was taking digitalis.

See Answer on Page 167



J. C. Kizziar, M.D., Fellow in Cardiology  
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## Licensing Nursing Home Administrators in Arkansas

Millions of Federal tax dollars are spent each year to provide care for chronically ill persons in our society who need nursing home care. Since there exists a very close correlation between the level of care patients receive in nursing homes and the level of competency of the management, the 90th Congress (in P. L. 90-248) required that each state establish a program to license administrators of long-term care facilities as a prerequisite for state participation in the Title XIX Medicaid Program. The Arkansas General Assembly passed Act 58 of 1969 which provided for such a program in Arkansas.

The Licensure of Administrator Program in Arkansas is a responsibility of the Division of Hospitals and Nursing Homes of the Arkansas State Department of Health. A Nursing Home Advisory Council was established to advise and assist the State Board of Health in the operation of the Licensure Program. The Division of Hospitals and Nursing Homes was given one additional position to implement the Program.

The Federal regulations promulgated under the Federal law set up the general guidelines for state programs. In general, states were given two years within which to assure that all nursing homes were administered by a permanently licensed individual who had proved to be competent by successfully passing examinations on areas pertinent to nursing home administration. For two years individuals who had previously been administrators were eligible for a provisional license which allowed them to continue as operators while they were in the process of obtaining a permanent license. The Federal regulations made the program a bit unusual since they did not contain a "grandfather" clause, which enabled practitioners to continue working indefinitely.

The examination approved in Arkansas was a three part test which allowed individuals to obtain points based on education and/or experience, successful completion of a written examination on the Arkansas Rules and Regulations for Nursing Homes in Arkansas and successful completion of an examination on nursing home administration developed by the Professional Examination Service. By awarding points for experience, persons who had many years of experience and who were competent were enabled to continue in their fields despite their lack of formal education. During the original two year period, ending January 1, 1972, approximately 350 persons representing all of Arkansas' 215 nursing homes successfully completed the examination.

For the original failures and those who requested some specialized training prior to taking the examination, a 100-hour training course was conducted in Little Rock. The program was taught by a consultant, from Aberdeen, South Dakota, who was extremely knowledgeable in areas pertinent to the training course. About 50 persons from throughout the State attended all or part of this training course. The cost of the course was borne by the individual applicants.

In January of 1972 the original Rules and Regulations were revised and approved by the State Board of Health. The new regulations escalated the requirements for new entrants. Under the present Rules and Regulations a person must be a high school graduate prior to taking the examinations. Before a person can be issued a license he, or she, must pass two examinations with a grade of 70% or higher. One of the examinations is based on Arkansas Rules and Regulations for Nursing Homes while the other is a national standardized test developed by the

National Association of Boards of Nursing Home Examiners.

After a person acquires a license it is necessary for him, or her, to attend ten classroom hours per year of continuing education. The hours are presented on a regional basis by State Health Department personnel. Other workshop hours presented by related agencies also are approved for credit. Many persons have already obtained their required recertification credit hours for 1972.

The future of the Administrator Licensure Program looks bright but there are a number of problem areas particularly from a national viewpoint which must be overcome. The most pressing problem is that of establishing a reciprocal agreement between states so that administrators may move freely and not have to meet new requirements in each state. This is particularly difficult since there are so many variations among the states in educational and experience requirements. Several national associations are now

vying for the leadership in establishing standards to make reciprocal licensing easier. Arkansas has already entered into reciprocal agreements with some of the other states.

Another interesting facet in the future of the Program is using the licensure requirements as a base for the development of college programs and possibly a degree in the field of long-term care administration. It is not at all implausible to imagine that Federal law will require a person entering the field after 1980 to have a bachelor's degree in Health Facility Administration. This possibility provides a very interesting challenge to Arkansas and to the nursing home industry.

The Program is a new and interesting expansion of the trend toward the licensure of health professionals. Arkansas has met the initial responsibility with regard to this Program. The future holds many possibilities for the development of new programs which could greatly enhance the level of patient care and safety which citizens have a right to receive in nursing homes.



## EDITORIAL

### Infections

Alfred Kahn, Jr., M.D.

**I**t has become trite to discuss man's conquest of infection; despite this, the battle against communicable disease goes on. Some of the early seeming victories now seem to have been only holding actions—for example, some bacteria have become resistant to antibiotics to which they formerly seemed susceptible. Roe, Jones, and Rowbury (Lancet, Vol. I, p. 194, Jan. 23, 1971) have described the "Transfer of Antibiotic Resistance Between Pseudomonas Aeruginosa,

Escherichia Coli, and Other Gram Negative Bacilli In Burns"; in other words, here is a situation one step beyond a single type of bacteria becoming resistant to an antibiotic. In this paper it is described how one strain of bacteria, in this case *Pseudomonas Aeruginosa*, transferred resistance to carbenicillin to *E. Coli*; the *E. Coli* then transferred this carbenicillin resistance to a carbenicillin sensitive strain of *Pseudomonas Aeruginosa* so that the latter became resistant to

carbenicillin. Resistance was also transferred to *E. Coli* for Tetracycline, Kauamycin, Ampicillin, and Cephaloridine; this indicated that the transfer of this R-factor (s) includes resistance to more than one type of antibiotic thus tending to vitiate the value of giving multiple antibiotics in some situations. The authors found that the resistance to Carbenicillin was due in most cases to the bacillus producing an enzyme, carbenicillinase; however, in one case, resistance was transferred to a strain of *Pseudomonas Aeruginosa* in which no carbenicillinase was made; yet the strain was resistant to carbenicillin.

Many patients who seem to have excellent resistance to infectious diseases, as determined by previous history, develop post-operative infections to the chagrin of their surgeons and physicians. Park, Brody, Wallace, and Blakemore (*Lancet*, Vol. I, p. 53, Jan. 9, 1971) found part of the answer in a study entitled, "Immunosuppressive Effect of Surgery." They used a tissue culture technique in which lymphocytes were grown in plasma; the lymphocytes were obtained from peripheral blood. These lymphocytes were tested, using phytohaemagglutinin as a stimulus, for their ability to incorporate radio-active thymidine and synthesize deoxyribonucleic acid. The authors found that surgery decreased this immune type response—and it was more severe in patients with cancer and heart disease. Previous studies on host resistance to infection have been made in which the resistance was measured by phagocytosis or by humoral opsonins in contrast to this study on a biosynthetic defect. It is possible that the anesthetic agent administered to patients is the cause of this immunosuppressive action.

"Hospital Acquired Infections" have been reviewed by Feingold (*New England Journal of Medicine*, Vol. 283, p. 1384, Dec. 17, 1970). Of these nosocomial infections, there has been a change in the types of bacteria over the past twenty to thirty years. Infections which occur on the outside of the hospitals are frequently staphylococcus, pneumococcus, etc. In the hospital a majority of the infections are gram negative bacilli. Hospital infections vary in frequency from 3.5% to 15.5% of the patients in the hospital. Among the causes for these increased infections are impaired humoral or phagocytic function as decreased neutrophils, poorly functioning neutrophils, defective cellular immunity and defective immunoglobulins; there are also condi-

tions which compromise mechanical barriers as catheters, surgery, etc. The preventive measures which the author advises include first of all those aimed at improving cellular and humoral defenses as transfusions of immunoglobulins and white blood cells; immunization is suggested also. Some measures can be taken to prevent colonization of pathogenic bacteria; this really means the avoidance of air-borne contamination and contact contamination. Some patients who are especially susceptible need to be isolated. Also, recommended are closed catheterization techniques, avoidance of prolonged indwelling venous catheters, proper decontamination of nebulizing and ventilation assistance equipment. Highly recommended is systematic methods of detecting breaks in technique which lead to infections and studies to rapidly detect hospital infections when they occur. Feingold believes that, in the future, hospital infections will be controlled by immunization against gram negative bacilli, manipulation of normal flora, and improved antibiotics.

Some papers detailing more specific infection problems have appeared. Ogra has reviewed the "Effect of Tonsillectomy and Adenoidectomy on Nasopharyngeal Response to Poliomyelitis" (*New England Journal of Medicine*, Vol. 284, p. 59, Jan. 14, 1971). For 30 years tonsillectomy has been implicated as reducing the resistance to Poliomyelitis. This study concerned the measurement of poliomyelitis virus levels in the nasopharynx and serum of forty subjects before and after tonsillectomy. Ogra found after surgery gamma A antibody in the nose and throat fell sharply to a fraction of the pre-surgical level; this reduction in antibody level persisted up to seven months.

Tracey, De, and Harper published the results on "Obesity and Respiratory Infection In Infants And Young Children." They studied two groups of children; an overweight group of 120 and a control group of 103 children. There were 23 respiratory infections in the control group and 47 respiratory infections in the overweight group. The authors feel that overweight may decrease respiratory movements or the overweight group may have a defective immune mechanism.

Of particular recent interest is the use of bacteria and their toxins to elucidate physiology—actually, this works as a feed back to then extend our knowledge of the effects of infection. Car-

penter (American Journal of Medicine, Vol. 50, p. 1, Jan. 1971) has summarized some information on the effects of cholera and electrolytes in an article entitled, "Cholera Enterotoxin—Recent Investigations Yield Insight Into Transport Processes". The loss of vast amounts of fluid with a high bicarbonate and potassium content occurs in cholera. This is the result of a single enterotoxin which has been isolated and purified. This enterotoxin put in the small bowel causes fluid outpouring in one hour and it is maintained maximally for ten hours before it declines in amount. The electrolytes excreted are isotonic and there is no histologic change in the mucosa—

this is in acute experiments. The fluid loss into the gut is not the result of increased capillary permeability. Most data indicates that the fluid and electrolyte loss is related to cyclic adenosine monophosphate activity—or else it mimics the action of this chemical which has been called an "intracellular hormone"; it is of interest that purified enterotoxin put elsewhere in the body other than the gut does seem to stimulate this cyclic adenosine monophosphate like activity in some areas. It is of incidental interest that cholera enterotoxin can now be made into an effective toxoid for immunization.



## MEDICINE IN THE



### THE MONTH IN WASHINGTON

The Democratic National Convention shouted approval of "a system of universal national health insurance" financed by federal funds and administered by the federal government.

The platform plank adopted by the convention at Miami Beach declares that a national health plan should cover all Americans "with a comprehensive set of benefits including preventive medicine, mental and emotional disorders, and complete protection against catastrophic costs, and in which the rule of free choice for both provider and consumer is protected. The program should be federally-financed and federally-administered."

There was little debate on the plank and little attention paid to it at the hectic convention where most interest was focused on the abortive stop-McGovern fight and on foreign affairs, taxes, welfare and other domestic concerns of the party platform that split the delegates.

Conspicuously missing from the health plank were any detailed recommendations on how the national health insurance program should be funded, how the government would operate it, or the cost, leaving Democratic presidential can-

didate George McGovern free to come up with his own program if he desires.

The platform on health declares that "good health is the least this society should promise its citizens. The state of health services in this country indicates the failure of government to respond to this fundamental need. Costs skyrocket while the availability of services for all but the rich steadily decline."

The plank states that the "next democratic administration" should:

- Incorporate in the national health insurance system incentives and controls to curb inflation in health care costs and to assure efficient delivery of all services;

- Continue to evaluate health maintenance organizations;

- Set up incentives to bring health service personnel back to inner-cities and rural areas;

- Continue to expand community health centers and availability of early screening diagnosis and treatment;

- Provide federal funds to train added health manpower including doctors, nurses, technicians and para-medical workers;

- Secure greater consumer participation and

control over health care institutions:

- Expand federal support for medical research including research in heart disease, hypertension, stroke, cancer, sickle cell anemia, occupational and childhood diseases which threaten millions;

- Eventual replacement of all federal programs of health care by a comprehensive national health insurance system;

- Take legal and other action "to curb soaring prices for vital drugs using anti-trust laws as applicable and amending patent laws to end price-raising abuses and require generic-name labeling of equal-effective drugs;

- Expand federal research and support for drug abuse treatment and education, especially development of non-addictive treatment methods."

Sen. George McGovern's stand on health is not clear at this time. The candidate did not stress health or any specific health legislation in his pre-convention bids for popular votes. However, he is expected shortly to set down his ideas on a national health program, a plan that likely will incorporate much of the Kennedy-Griffiths philosophy.

In this unusual election year which has turned the democrats inside out, the McGovern brain trust might decide to promote health once the campaign gets going. It could be one of the battleground issues. Right now, though the Nixon administration appears to have "de-fused" health by forcing the debate on the question of degree, not on whether there should be a national health program. Furthermore, Administration spokesmen can point to the fact that the democratically-controlled congress did not act on the Administration's health program or any other for two years.

\* \* \*

The HEW Department has said hospitals funded under the Hill-Burton Act will be reviewed on a case-to-case basis to determine whether a "reasonable volume" of free care is furnished to persons unable to pay.

This interim regulation will enable hospitals already providing a large amount of free care to submit a financial report to that effect and be automatically in compliance. It also provides "presumptive compliance" levels of free care, lower than first recommended in April, which can be met in any one of three ways an institution chooses. In addition it sets guidelines for individualized determination for hospitals which

are unable to meet the "presumptive compliance" levels.

In general, the new policy met objections of the American Hospital Association that the original proposals could put many hospitals out of business.

HEW Secretary Elliot Richardson said the regulation, modified as recommended to him by the Federal Hospital Council, is being issued now in interim form so that some regulation be immediately in effect in view of pending court cases seeking to compel him to act promptly.

Vernon E. Wilson, M.D., Administrator of the Health Services and Mental Health Administration, which directs the Hill-Burton program, said:

"Much misunderstanding arose over the earlier version of this interim regulation published for comment back in April. Many people felt that the 'presumptive compliance' guidelines constituted standards to which hospitals would be held. It is important to understand that any institution which falls below the 'presumptive compliance' guidelines will have an individualized determination of what constitutes a reasonable volume of free care."

\* \* \*

The National Institutes of Health has announced it will conduct major study of acupuncture, the ancient Chinese medical practice of curing illness and relieving pain by piercing the skin with needles.

Howard P. Jenerick, special assistant to the Director of the National Institute of General Medical Sciences, said the study would involve use of acupuncture as an anesthetic and alleviation of pain from neuralgia, nerve injuries, and cancer.

He predicted the study, to cost "hundreds of thousands" of dollars, would lead to acupuncture treatment of American patients within a year.

"Acupuncture is an important thing that has to be looked into," Jenerick said. "We are now committed to starting a significant investigation of it. The question is whether you want to shoot for the moon or send somebody to the corner book store for a book about it. This will be somewhere in between those extremes."

The announcement was made in a statement by Dr. Robert Q. Marston, NIH Director, who said the investigation was recommended by a committee of experts in anesthesiology, neurol-

ogy, neurophysiology and psychology who met July 17-18 at NIH. Committee chairman was Dr. John J. Donican, a pain authority at the University of Washington's School of Medicine in Seattle.

"After considering the many suggested uses of acupuncture, the Committee recommended that the most valuable first approach in the United States would be studies on the method's use for surgical anesthesia and for the alleviation of certain chronic pain syndromes," Marston said.

Among uses considered by the Committee but rejected for immediate exploration were acupuncture treatment for arthritis, toothache, low back pain, rheumatism and insomnia, Jenerick said.

An election year battle between a democratic congress and President Nixon is in prospect over bill appropriating funds for federal health programs. Nixon feels budget busting HEW money bill which soared \$2 billion above what he recommended and other pending appropriations measures will send the federal budget for this fiscal year out of sight. White House aides say congress already has topped the budget by more than \$6 billion.

Nixon is considering either a special message to congress, or a national television address, or both, outlining the perils of higher federal outlays. The maneuvering for political advantage that will mark the remainder of this session of congress promises the fascination and intricacies of a championship chess match. Nixon is prepared to pound home the theme that fat federal budgets lead to inflation and higher federal taxes. Democrats are geared to holler that the Administration wants to chop vital and popular federal programs.

"There seems to be a cynical strategy on the part of some democratic leaders to deliberately send to the President proposals with good objectives but proposals that substantially exceed his budget requests," declared William Timmons, White House Assistant for Congressional Relations. President Nixon was quoted by Secretary of the Treasury George Shultz as saying that "the ball game on the control of inflation is fought out fundamentally in terms of monetary and fiscal policy... We feel that we are at the point where any time you have a vote for extra spending going beyond the President's budget, you have a vote for higher prices or higher taxes."

\* \* \*

The fate of the physicians' draft next year rests with congress and the extra pay bill for military physicians... a measure now before the House Armed Services Committee.

Assistant Secretary of Defense for Health and Environment, Richard Wilbur, M.D., who helped fashion the new program, is keeping his fingers crossed that the lawmakers will okay the bill this session. Without it he says, the draft undoubtedly will have to be extended for young physicians.

Little controversy has cropped up over the legislation and barring some unexpected obstacle, it stands an excellent chance of whisking through congress before adjournment this year.

Designed to "facilitate the establishment of an all voluntary army and to maintain sufficient numbers of career officers in critical areas," the pay bill authorizes yearly bonuses of up to \$17,000 for qualified physicians "in addition to any other pay or allowances to which he was entitled."

This would be in addition to the \$100 a month extra pay for the first two years of service and \$350 a month thereafter.

\* \* \*

The persistent spillover of legal drugs to the black market has spurred the federal government to inaugurate a program of training state and local police and prosecutors in the intricacies of running down the malefactors.

A pilot program is being started for Texas, Michigan and Mississippi, which will receive \$333,000 to finance the training which will be conducted in Washington, D. C.

An official of the Bureau of Narcotics and Dangerous Drugs has said that despite the existence of federal legislation in the field and the enactment by 35 states of model state controlled substances acts, the illegal diversion of drugs remain a major problem.

The BNDD exercises its supervision at the level of the manufacturer and distributor, the states are responsible for policing at the retail level—retail and hospital pharmacies, and physicians' offices.

According to a BNDD official, many local police are not equipped or trained to carry out the type of detective work required to ferret out people selling legitimate drugs on the black market. In addition, he noted, prosecutors are not familiar with this area and unsure of how to handle the cases that are brought.

Specialized training in such fields as book-keeping is needed because often the evidence, as in tax cases, depends on careful checking of the mandatory records that must be kept by all who dispense drugs that are subject to abuse, the BNDD aide said.

He added that even when police are alerted to the apparent criminal dealings of a local pharmacy, for example, they often find themselves in a position where they do not know how to accumulate the required evidence of wrongdoing.

\* \* \*

Federal funds have been withheld from 579 nursing homes for failure to meet minimum standards of health and safety as ordered by President Nixon last August.

HEW Secretary John Veneman said 327 nursing homes—222 of them in New York state—lost their certification and another 252 homes withdrew from the program because they were unable or unwilling to meet the standards.

Of the approximately 7,000 homes receiving federal nursing home aid, 1,469 received full certification and 4,766 were certified for six months to give them time to correct deficiencies not affecting health and safety. An additional 244 are still in the certification process.

Veneman's report covered only nursing homes which received federal aid under the medicaid program. It did not affect the approximately 16,000 homes for the elderly not receiving such assistance.

Veneman said the year-long re-certification process indicated "the majority of nursing homes are providing quality care in safe and helpful surroundings."

\* \* \*

Some relaxation of tight fee hike controls on physicians may be in the offing. Health Services Industry Committee is considering changes in basic regulations covering institutional and non-institutional providers. There is a possibility that present 2.5 percent limit may be upped to some degree on allowable fee increases for physicians and dentists, lowest rate permitted for any profession except those with more than 60 employees. Committee members believe controls have worked well to date in the health field, pointing to sharp slash in cost rise since control imposition.

\* \* \*

The Administration soon will recommend legislation to halt illegal traffic in methadone as

a substitute for heroin.

John Ingersoll, Director of the Bureau of Narcotics and Dangerous Drugs, told the National Commission on Marijuana and Drug Abuse: "The increase in the last several years is so dramatic as to indicate that our present legal controls are inadequate."

Ingersoll said that in New York City 92 percent of a group of heroin addicts reported they had been offered illegal methadone by pushers and 13 percent said they had sold it themselves.

He said a similar study in Miami showed that 40 percent of the applicants to a legitimate methadone maintenance center already were using the drug illegally.

In advising the panel that the Administration soon would send congress legislation, Ingersoll commented:

"In some programs patients are actually permitted to handle and administer narcotic medication with the result that much of the drug has been pilfered for sale in the illicit traffic."

\* \* \*

Two manufacturers have stopped producing nine bacterial vaccines, rather than attempt to meet the Food and Drug Administration's new requirements for "substantial evidence" of effectiveness.

The nine include several vaccines for upper respiratory infections, a staphylococcus vaccine, and a diagnostic agent for detecting brucellosis infection.

Five of the vaccines were produced by Merck & Dohme, a division of Merck & Co.; four were made by Merrell-National Laboratories, a division of Richardson-Merrell, Inc. The firms voluntarily turned in their product licenses, which were then cancelled by FDA.

Both companies said the vaccines were old, low-volume products, and sales would not justify the testing required by the new efficacy regulations.

All nine products are among 32 licensed bacterial vaccines for which no standards of potency were ever established.

The Merck products include vacagen tablets, brucellen antigen, staphylo-strepto-serobacterin vaccine, catarrhalis serobactin vaccine, and sensitized bacterial vaccine-H influenzae. Merrell's products include catarrhalis serobacterin vaccine, strepto-staphylo-vatox, respiratory vatox, and staphylococcus toxoid-vaccine vatox.

# Report of AMA Meeting

## June 18-22, 1972

San Francisco, California

Purcell Smith, Jr., M.D., Delegate\*

This report is a summary of the more significant actions of the House of Delegates at the June 1972 Annual Convention of the AMA. One of the more interesting events at this Annual Meeting was a session held the day prior to the opening of the House of Delegates, held by the Council on Long-Range Planning and Development, intended as an open forum at which any member of AMA could express ideas, objections, concerns, and so forth, for consideration. Many topics were covered, but those which seemed to receive the most comment were 1) possible limitation of terms of delegates to the AMA, and alteration in the present structure of the terms of the Board of Trustees; 2) geographic distribution of trustees; 3) separation of the scientific and business sessions rather than having them meet simultaneously; and 4) better liaison between AMA and medical student groups and house staff groups.

The House of Delegates met for a total of seventeen hours and twenty minutes, considering fifty-nine reports and one hundred thirty resolutions.

Dr. Russell Roth of Erie, Pennsylvania, was elected president-elect; Dr. Frank Walker of Georgia was elected as Speaker of the House to replace Dr. Roth; and Dr. Tom Nesbitt of Tennessee was elected Vice Speaker of the House.

In his presidential address, Dr. Carl Hoffman expressed great concern over divisions and factions within the AMA, particularly commenting on the "cry for unionism that is being raised in our profession as never before." Though he agreed that trade unions had been an effective and valuable social instrument in our nation, he made a plea that unionization of medicine be rejected since, in his opinion, it is not a proper activity for physicians to engage in. He stated, "Unionism seeks its objectives through group

power, achieving its power by carefully controlled conformity and the threat of a strike." He feels that a strike, or even the threat of a strike, is a threat to withhold services and is therefore a violation of medical ethics. On other matters, Dr. Hoffman indicated, "Peer review is an idea whose time has come. With the acceptance of the third party payor system, we accepted the ultimate necessity for certain controls by those who pay the bills. Peer review was initiated by the profession itself. It would be tragic and a derelict of duty if we were to surrender that initiative to others. It is not only the better part of valor, but the best part of realism, not to let that happen." He also expressed concern over "the health systems comparisons game," and indicated that he plans to visit numerous countries to study their health systems, and provide a report to physicians and the American public.

Outgoing President Wesley Hall, in his final report to the House, made several specific recommendations for consideration by the House, including:

- 1) Study of physician manpower supply and medical schools to determine precisely how many doctors the country needs, and how they should be distributed. He noted that lack of careful planning resulted in an oversupply of teachers and engineers, with resulting unemployment of those professionals.
- 2) Better liaison with medical schools.
- 3) A National Speakers' Bureau of the AMA.
- 4) Improvement of liaison with constituent and component societies.
- 5) A management survey of AMA.
- 6) A three-times yearly report from AMA to delegates and state society officials showing current AMA membership, state by state.

Specific items of business considered by the House included:

\*4001 West Capitol, Little Rock, Arkansas 72205.

1) *Opinion Poll.* The House received and adopted results of the first membership opinion poll on critical issues affecting the practice of medicine. The overwhelming majority of 94,000 respondents (73.1%) recommended that AMA continue to seek to retain the basic principles of private practice in any government enacted health program. Fifty-five percent preferred the AMA plan of national health insurance over all others. If compulsory health insurance were adopted, 28.1% of respondents said they would continue private practice "with those patients who would pay my private fees," and 24.6% said they would "join the federal program and continue to practice under it." 21.6% were undecided as to what they would do. On the work of the Association, the poll indicated that not enough emphasis was being given to items including communications to the public, practice management problems, and socioeconomic issues; it was felt that proper emphasis was being placed on scientific activities, medical education, continuing education, membership benefits, and communication to the medical profession.

2) *Physicians' Assistants.* Reflecting concern for "potential problems which could arise," the House approved a policy opposing employment of physicians' assistants in hospitals. The move was recommended by the Council on Health Manpower and the Board of Trustees due to the feeling of the Council that "direct responsibility to and supervision by a physician is a critical element in the safe and effective performance of a physician's assistant."

3) *Allied Personnel.* Report F of the Board of Trustees, dealing with education and utilization of allied health manpower was adopted. Some of its recommendations urged AMA to:

1. Continue to support efforts to increase the number and improve the utilization of medical, nursing, and allied personnel until 1975, with re-evaluation then on the need for further efforts.
2. Continue to support improvement of the professional and financial potential of allied health careers.
3. Continue efforts to expand allied health career opportunities for minority and disadvantaged groups.
4. Strongly reaffirm support of an expanded role for the nurse in providing patient

care, and study the nurse's role in relation to the physician assistant, so the two professions can complement rather than duplicate one another.

4) *Graduate Medical Education.* In a major step, the House approved Report H of the Board of Trustees which establishes a Liaison Committee on Graduate Medical Education and a Coordinating Council on Medical Education. The panels will include representatives of the AMA, Association of American Medical Colleges, Council of Medical Specialty Societies, American Hospital Association, the public, and the federal government. The House also recommended that "as soon as possible after formation of the Committee and Council, AMA representatives institute negotiations to provide representation from interns and residents on the Committee, and from interns, residents, and medical students on the Council."

5) *Marihuana.* After extensive debate, the following statement was adopted:

"This AMA House of Delegates does not condone the production, sale or use of marihuana. It does, however, recommend that the personal possession of insignificant amounts be considered at most a misdemeanor with commensurate penalties applied."

The statement also recommended "prohibition for public use, and that a plea of marihuana intoxication should not be a defense in any criminal proceeding."

6) *Fee Determinations.* Delegates approved a strong resolution aimed at any independent determination of customary physicians' fees:

"Resolved, that where benefits include physicians' fees, management, labor and third party carriers shall consult with duly constituted representatives of organized medicine before determining usual, customary, and reasonable fees." The resolution was adopted in lieu of several others, all protesting actions of Aetna Life and Casualty Insurance Company. It added:

"The medical profession will not condone or tolerate action on the part of any third party that would encourage or promulgate litigation in the settlement of any such dispute." This referred to a practice of telling policyholders that, except where there was prior agreement between patient and physician as to the fee, the insurance company would pay the patient's legal costs if

the physician sued to collect his full fee. The resolution also reminds physicians that "they have the right to enter into prior agreement with patients regarding the fee for services to be rendered."

7) *Medical Students.* Bylaws changes which give medical students membership in the AMA and representation in the House of Delegates were approved by the House. A new class of direct membership for students was created, as was done previously for interns and residents. Such membership is available to members in good standing of the Student American Medical Association, or upon application with endorsement of two regular members of the AMA on the faculty of the student's school, provided there is no disapproval of membership by the Judicial Council. Students will elect their delegate and alternate delegate at a business meeting the day before each annual convention opens, with delegates to serve until the next annual session. Student dues are to be decided later by the House.

8) *Group Disability.* The House approved acceptance of a new contract with the Fireman's Fund Insurance Company to continue the AMA Group Disability Insurance Program. The contract is to run five years, ending September 1, 1977, although the program is not guaranteed beyond September 1, 1974. There will be no increase in premium, but benefits will be reduced by 50% from age 65 through 69, and an additional 50% at age 70, remaining at that level for life. The amount of benefits payable for accidents will be reduced the same as sickness benefits. The Board said Fireman's Fund insisted on the change and that no alternate carrier could be found.

9) *Association and House Matters.* Several proposals dealing with AMA structure and delegate representation and terms of office were considered. The House adopted a resolution endorsing preservation of the AMA as a federation of constituent and state medical associations, with proportionate representation as at present. It also directed the Council on Long-Range Planning and Development "to consider and explore any and all methods whereby medical specialty societies and other medical organizations may have more input into the AMA." The question of geographic representation on the Board of Trustees also was referred to the Council, with instructions to report back no later

than the next annual meeting. The House will vote at the 1972 clinical meeting on several proposals as to alterations of the length of term of the members of the Board of Trustees. The House decreed that resolutions must be submitted to AMA Headquarters no later than 30 days prior to opening of the session at which it is to be considered; however, a constituent society whose House adjourns during, or one week before, the 30-day period is allowed 7 days after its meeting ends to submit resolutions.

10) *Miscellaneous.* The House adopted report E which says, "Insurance carriers should be urged to provide nondiscriminatory coverage for alcoholism and drug dependence." Essentials of approved educational programs for urologic physicians' assistants, respiratory therapy technicians, and respiratory therapists, and for medical assistants in pediatrics were adopted.

\* \* \* \*

#### COUNCIL MINUTES

The Council of the Arkansas Medical Society met at 10:00 A.M. on Sunday, August 13, 1972, at the Ramada Inn at West Memphis. Members of the Council present were: Long, Shuffield, Wood, Kirkley, P. Gray, D. Gray, Fairley, Kirby, and Verser. Others present included W. E. Phipps, Edgar Easley, Milton Deneke, Glen Baker, Winston Shorey, Harry Hayes, W. A. Hudson, Leighton Millard, Charles Silverblatt, H. G. Lanford, George Mitchell, J. B. Elders, Francis Henderson, Mr. Sam McGuire, Mr. J. B. Smith, Mr. Wallace Hudson, Mr. Paul Harris, Mrs. Henry Kirby, Mrs. J. B. Elders, Mr. Schaefer, Mr. Rainwater, and Miss Richmond.

Chairman Long welcomed the guests from eastern Arkansas who had been invited to observe the Council meeting.

Business was transacted as follows:

- Upon the motion of Gray and Kirkley, those members of the Council present voted to resolve themselves into a "Committee of the Whole" for transaction of business.
- Winston Shorey, Dean of the Medical School, advised the Council of the school's application for a grant under the Area Health Education Centers (AHEC) program. The grant application provides for projects in El Dorado and Fort Smith and tentatively in Fayetteville. The program would involve use of facilities and physicians in those areas in training of medical

students. Upon motion of Gray and Fairley, the Council voted to approve the concept of the AHEC project as presented by Dean Shorey.

3. The Chairman of the Insurance Committee, Harry Hayes, presented a request from Raney Insurance Agency that the Society appoint the agency as an "exclusive representative for a period of six months for purposes of researching and developing an insurance program" for the consideration of the Society. The Council voted to go on record as endorsing whatever action the insurance committee deems appropriate after consultation with the Society attorney (motion by Gray and Kirkley).
4. Chairman Long presented a proposed division of committees for assignment to the three vice presidents. Upon the motion of Gray and Shuffield, the Council approved the assignment of committees to the vice presidents as follows:

First Vice President:

- Committee on Medical Legislation
- Sub-Committee on National Legislation
- Sub-Committee on Aging
- Committee on Mental Health
- Sub-Committee on Traffic Safety
- Committee on Medical Education
- Committee on Insurance
- Committee on Annual Session

Second Vice President:

- Committee on Cancer Control
- Committee on Public Health
- Sub-Committee on Tuberculosis
- Sub-Committee on Industrial Health
- Immunization Sub-Committee
- Sub-Committee on Liaison with Vocational Rehabilitation
- Sub-Committee on State Health and Medical Resources for Civil Defense
- Committee on Medicine and Religion

Third Vice President:

- Sub-Committee on Maternal and Child Welfare
- Sub-Committee on Physical Fitness and School Health
- Committee on Hospitals
- Committee on Public Relations
- Committee on Liaison with the Auxiliary
- Advisory Committee to the Medical Assistants Society

Committee on Veterans Administration Affairs  
 Committee on Liaison with the Nursing Profession

5. Secretary Shuffield advised that, in response to the Society request, the Insurance Commissioner had suggested a meeting with the Society's Executive Committee on the Aetna Insurance Company request for a rate increase on malpractice insurance policies. The Council voted to give approval to the Executive Committee's meeting with the Insurance Commissioner to protest the rate increase.
6. Secretary of the Medical Board, Joe Verser, advised the Council that physicians in a locality where an osteopath had applied for hospital staff privileges were requesting guidance and assistance from the Medical Society. Upon the motion of Kirkley, the Council voted to take no action as a Council or as representatives of the Arkansas Medical Society, but to go on record as not objecting to Mr. Warren's consulting with the physicians concerned on an individual basis if such consultation is mutually agreeable.

The meeting adjourned at 11:40 A.M.

APPROVED: C. C. Long, M.D.  
 Chairman of the Council

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**Society Meets with Congressman Alexander**

Congressman Bill Alexander of Arkansas' first congressional district met with members of the Arkansas Medical Society on August 13th in West Memphis. Congressman Alexander spoke concerning pending legislation for national health insurance and the "Family Health Center" grant program.

Dr. H. G. Lanford, president of the Crittenden County Medical Society, welcomed the group to West Memphis. Dr. John Wood of Mena, president-elect of the State Society, served as presiding officer. Dr. Asa Crow of Paragould spoke on the county health clinics and other Government grant programs. Dr. Milton Deneke of West Memphis discussed the county health clinic which has been in operation in Crittenden County and the Family Health Center project which is to be implemented.



Congressman Bill Alexander speaks to Society members on pending legislation for national health insurance at August 13th meeting in West Memphis.



## THINGS TO COME

### **Physicians and Nurses to Meet**

There will be a dinner meeting of nurses and physicians at 6:30 P.M. on Tuesday, October 17th at the Ramada Inn, Jonesboro. All physicians and nurses are invited, especially those in the Jonesboro area. This is the annual "Rap Session" of the Arkansas State Nurses Association and the Arkansas Medical Society. The subject will be "Expanded Role for Nurses as Physician Assistants," and/or other subjects. The dinner will be Dutch treat. For dinner reservations, please write: Arkansas State Nurses Association, 117 South Cedar, Little Rock, Arkansas 72205. Dr. C. Lewis Hyatt is Chairman of the Arkansas Medical Society's Committee on Liaison with the Nursing Profession; Dr. Elois Field is Chairman of the Arkansas State Nurses Association's Committee on Liaison with the Medical Profession.

### **Provocative Allergy Course**

A practical course in the technique of intradermal provocative food testing and food injec-

tion therapy will be held March 10-11, 1973, at the Admiral Semmes Hotel, Mobile, Alabama. The course will also cover inhalants, chemicals, drugs, fungi, yeasts, viruses, hormones, terpenes, air-pollutants, insects, and contact dermatitis. For further information contact Dr. Joseph B. Miller, 3 Office Park, Suite 110, Mobile, Alabama 36609.



### **ANSWER — Electrocardiogram of the Month**

This is an example of multifocal atrial tachycardia and reveals the following four features, characteristic of same.

- 1) Atrial rate > 100
- 2) Discrete P waves of varying morphology from at least three foci.
- 3) Irregular variation of P-P interval
- 4) Isoelectric baseline between P waves

The treatment of this arrhythmia varies from that of atrial fibrillation, a rhythm with which it is confused. An excellent discussion on this point is provided in the *New England Journal of Medicine* 279, 344, 1968, in an article entitled "Multifocal Atrial Tachycardia" by Yurchak, et al.



## PERSONAL AND NEWS ITEMS

### Recipients of Award Announced

The following physicians are recipients of the American Medical Association "Physician Recognition Award" for 1971: Dr. John E. Alexander, Magnolia; Dr. Albert L. Baltz, Pocahontas; Dr. Michael L. Buffington, DeQueen; Dr. James Guthrie, Camden; Dr. John W. Hard, Blytheville; Dr. Robert W. Hunter, Jr., Magnolia; Dr. Earl Parsons, Arkadelphia; Dr. William T. Shanlever, Jonesboro; and Drs. Edwin N. Barron, Jr., Charles M. Boyd, Donald G. Browning, Glenn V. Dalrymple, Surinder Gupta, Michael G. Keeran, Carl J. Raque, and John L. Wilson, all of Little Rock.

The purpose of the award is to accord recognition to physicians who participate regularly in continuing medical education and to encourage other physicians to engage in that important activity. Application for the award is voluntary. A total of 150 credit hours of continuing education must be accumulated within a three year qualifying period.

### Physicians Appointed

Dr. Ernest H. Harper, who is associated with the Little Rock Diagnostic Clinic in North Little Rock, has been reappointed by Governor Bumpers to the State Health Planning Council. Dr. Roger Bost, Director of the Arkansas Social and Rehabilitative Services was newly appointed to the Council.

### Physician Opens Clinic

Dr. Curtis E. Stover, Jr., recently opened a clinic in Amity. Dr. Stover is associated with Dr. James T. Blackmon in Arkadelphia and plans to visit the clinic three mornings each week.

### Dr. Rowland Named Fellow

Dr. E. Driver Rowland of Hot Springs has been named a Fellow in the American College of Cardiology.

### New Officers Named

New officers of the Arkansas Academy of Family Physicians are Dr. Amail Chudy, North Little Rock, president; Dr. Carie D. Buckley, Fayetteville, president-elect; Dr. Thomas D. Honeycutt, Little Rock, vice president; and Dr. Paul A. Wallack, Monticello, secretary-treasurer.

### Physicians Locate

The Dickinson Clinic in DeQueen has announced the addition of Dr. Ollie D. Brown, Jr., to the Clinic staff.

Dr. R. A. Hoagland recently began practicing in Dumas at the Dumas Medical Clinic, formerly known as the Lazenby-Blackwell Clinic.

Dr. Bruce A. Bevill has joined the staff of Medical Surgical Associates in Salem as a general practitioner.

Dr. John L. Gustavus is a new member of the staff of the DeQueen Clinic in DeQueen.

Dr. William J. Tolleson, a native of Amity, has joined the staff of the Saltzman-Guenther Clinic in Mountain Home.

### Physician Honored

The citizens of Waldron honored Dr. H. B. Wright with an appreciation party in late August. The event also served as a "get acquainted" affair for Dr. Jose Rodriguez, a new doctor in Waldron.

### Arkansas Thoracic Society Elects Officers

Dr. Arthur Moore of Fayetteville has been elected president of the Arkansas Thoracic Society for 1972-73. Other elected officers are: Dr. Owen Clopton, Jonesboro, president-elect; and Dr. Jack Wagoner, Little Rock, secretary-treasurer. Dr. Max Cheney of Mountain Home was elected to serve on the Executive Committee. Dr. Larkin Wilson of El Dorado is the immediate past-president.

### Dr. Padberg Leaves State

Dr. Frank Padberg has given up the practice of Neurosurgery in Little Rock and has moved to Chicago where he will assume the duties of Assistant Director of the American College of Surgeons.

### Physician Attends Training Program

Dr. L. A. Whittaker of Fort Smith is participating in a Nation-wide program for carbon monoxide testing. Dr. Whittaker, who is with the Sebastian County Health Department, attended a training program for investigators at Denver, Colorado, in September. The program included courses in techniques of collecting blood for carbon monoxide hemoglobin determination and techniques of air sampling in the home.



Dr. Ben N. Saltzman of Mountain Home, Chairman of the Society's Committee on Public Health, and Polly Norton, first place winner in the State 4-H O-Rama Health Activity Contest.

#### **Dr. Saltzman Presents Award**

The pretty young lady pictured with Dr. Ben Saltzman is Miss Polly Norton of West Ridge, Arkansas. Polly took first place in the State 4-H O-Rama Health Activity Contest with an outstanding talk on the subject of drug abuse. The Committee on Public Health has been involved with the Health Activity at the State level for several years. This year, for the first time, the Arkansas Medical Society has underwritten the trophy expense for each of the District O-Rama Health Contests as well as the State 4-H O-Rama Health Activity.

The executive staff of the Cooperative Extension Service has indicated that the Health Activity would not have been possible without the positive interest and guidance of the Medical Society and the Physicians who took part during all the District O-Ramas in addition to the State O-Rama.

The following physicians cooperated with the Medical Society at the District Level: Drs. John B. Kirkley, Jonesboro; J. B. Jameson, Jr., Camden; John P. Wood, Mena; Paul Gray, Batesville; Morriss M. Henry, Fayetteville; Raymond A. Irwin, Pine Bluff; L. J. Pat Bell, Helena; and Charles F. Wilkins, Jr., Russellville.

#### **UAMC Graduate Honored**

Dr. William T. Branch of Little Rock, a 1971 graduate of the University of Arkansas School of Medicine, was voted "Intern of the Year" by the House Staff Training Committee at the University of South Florida School of Medicine, Tampa General Hospital, Tampa, Florida. Dr. Branch is a surgery resident at Tampa General Hospital. After completion of one year of surgical training, he plans to begin a residency in urology at the same institution.

#### **Dr. Quimby Delivers Scientific Papers**

Dr. Charles W. Quimby, Jr., an assistant professor of anesthesiology at the University of Arkansas Medical Center, delivered scientific papers on medicine and American Law at the Third Annual Czechoslovak Conference on Medical Law with International Participation at Bratislava, Czechoslovakia, in September. One paper was entitled "How Common Law Extends Current Social Policy," and the other paper dealt with the changes in modern medical practice which seem to conflict with the law. Dr. Quimby holds a law degree from the University of Pennsylvania.



#### **Carcinoma of Lung**

L. Lince and D. J. Lulu (VA Hosp, Des Moines, Iowa 50309)

*Arch Surg* 102:103-107 (Feb) 1971

When the results of treatment in 687 patients with carcinoma of the lung were analyzed, the beneficial effect of greatly improved diagnostic, prognostic, and therapeutic modalities in recent years was disappointingly low. The carcinomas of over 60% of the patients were inoperable when first seen and less than half of those remaining were resectable. Cough and pain remained the most common presenting complaints. The right upper lobe was the most commonly involved site and squamous cell the most common variety. X-ray films and bronchoscopy were the most valuable diagnostic aids and scalene node biopsy was the most valuable prognostic aid. The average survival rates related to the form of treatment were 2 months with no treatment, 5 months with chemotherapy, 9 months with x-ray therapy and chemotherapy, and 17 months with resectional therapy in those surviving operation.



## NEW MEMBERS

### **Dr. Jerry Lee Hitt**

Dr. Jerry L. Hitt, a native of Grosse Point, Michigan, is a new member of the Benton County Medical Society.

He attended Arkansas State University in Jonesboro, Arkansas, and was graduated from the University of Arkansas School of Medicine in 1970. Dr. Hitt completed his internship at John Peter Smith Hospital, Fort Worth, Texas.

Dr. Hitt, a family practitioner, has been associated with the Rogers Medical Center, Ltd., in Rogers, Arkansas, since July 1971.

### **Dr. Curtis E. Stover**

Dr. Curtis E. Stover has been accepted for membership in the Clark County Medical Society. Dr. Stover was born in Little Rock.

He received his B.A. degree from the University of Arkansas and is a 1969 graduate of the University of Arkansas School of Medicine. His internship was completed at St. Elizabeth Hospital, Dayton, Ohio.

Dr. Stover is associated with Dr. James T. Blackmon at 1008 Pine, Arkadelphia, where he is in the general practice of medicine.

### **Dr. Willis A. Williams, Jr.**

Dr. Willis A. Williams, Jr., is a new member of the Crawford County Medical Society. He is a native of Cape Girardeau, Missouri.

Dr. Williams received his pre-medical education at Southeast Missouri State College in Cape Girardeau, and was graduated from the University of Tennessee College of Medicine, Memphis, Tennessee, in 1958. His internship was completed at the University of Tennessee Memorial Research Center and Hospital, Knoxville, Tennessee. With the exception of two years which were spent in the United States

Army, Dr. Williams was in practice in Cape Girardeau, Missouri, from 1959 until recently.

Dr. Williams, a family practitioner, is associated with Dr. M. C. Edds at 1103 Chestnut, Van Buren.

### **Dr. Coburn Sayre Howell, Jr.**

Dr. Coburn S. Howell, Jr., has been accepted for membership in the Pulaski County Medical Society. He was born in Wynne, Arkansas.

Dr. Howell was graduated from Hendrix College, Conway, Arkansas, in 1961, and, in 1965 he was graduated from the University of Arkansas School of Medicine. Dr. Howell interned at Methodist Hospital of Dallas, Dallas, Texas. He received his residency training in Neurology at the University of Arkansas Medical Center in Little Rock and Parkland Memorial Hospital in Dallas.

Dr. Howell is a Neurology instructor at the University of Arkansas Medical Center.

### **Pulaski County**

The following interns and residents are new members of the Pulaski County Medical Society:

#### **University of Arkansas Medical Center:**

Thalerng Balachandra, Resident — Nuclear Medicine

John A. Baldridge, Fellow — Endocrinology

L. Ford Barnes, Resident — Internal Medicine

James Bean, Resident — Otolaryngology

Margaret D. Beasley, Resident—Anesthesiology

James S. Beckman, Jr., Resident —

General Surgery

Jack L. Blackshear, Resident — Medicine

Jerry D. Blaylock, Resident — Psychiatry

Hugh F. Burnett, Resident — Surgery

David W. Burnsed, Resident — Surgery

Leland Dodd, Intern — Pathology

Cheryl D. Friday, Resident — Anesthesiology

Michael G. Futrell, Intern

Robert C. Galbraith, Resident — Neurology

Wilbur M. Giles, Resident — Neurosurgery

John D. Ginger, Resident — Dermatology

Charles B. Greene, Resident — Psychiatry

Guy H. Gross, Resident—Obstetrics/Gynecology

Surinder N. Gupta, Resident — Neurosurgery

H. M. Harmon, Resident — Pediatrics

Ruben M. Harris, Resident—Neurology

James R. Hildebrand, Intern

Alma Houston, Resident — Psychiatry

## NEW MEMBERS

Thomas T. Jefferson, Intern — Pediatrics  
Robert D. Johnson, Intern  
Edwin C. Jones, Resident — Psychiatry  
Michael F. Koehl, Resident — Pediatrics  
Tom Kraus, Intern  
Virgle E. Lyons, Resident — General Surgery  
James Y. Massey, Resident — Ophthalmology  
Franklin B. Minirth, Resident — Psychiatry  
Joseph W. Matthews, Fellow—Pediatric Allergy  
Charles M. McClain, Jr., Resident — Radiology  
John D. McConnell, Resident — Pathology  
William D. McKnight, Resident — Medicine  
Jeffrey Niemann, Resident — Dermatology  
Nancy F. Rector, Fellow — Internal Medicine,  
    Pulmonary Disease  
Michael C. Reese, Resident — Otolaryngology  
Philip E. Rosen — Resident, Orthopaedics  
Charles F. Safley, Jr., Resident — Dermatology  
George T. Schroeder, Resident —  
    Ophthalmology

Ladd J. Scriber, Resident — Urology  
Sidney Simpkins, Resident — Anesthesiology  
Louis G. Singleton, Resident — Pathology  
Ricardo Sotomora, Intern — Pediatrics  
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R. Jeffrey Eisenach, Resident—Family Practice  
Rex W. Ross, Intern  
Hoy B. Speer, Resident — Family Practice

### Arkansas State Hospital:

Thomas R. Koehler, Resident



## OBITUARY

### Dr. Calvin Abner Churchill

Dr. Calvin A. Churchill of Batesville died August 5th, 1972. He was born in Belleville, Kansas, in 1903.

Dr. Churchill was graduated from the University of Arkansas School of Medicine in 1929. He was a veteran of World War II, a member of the American Medical Association, the Arkansas Medical Society and Independence County Medical Society. He was a member of the First United Methodist Church and the Kiwanis Club.

Dr. Churchill is survived by his wife, Merle, one daughter, one sister, and four grandchildren.

\* \* \*

### Dr. David Hoffman Pontius

Dr. David H. Pontius died August 16th, 1972, at the age of 51. He was born in Chicago, Illinois, and had practiced at the Hamilton Clinic in West Memphis for the past twenty years.

He was graduated from DePauw University, Greencastle, Indiana, in 1942 and from Northwestern University Medical School, Chicago, Illinois, in 1950. Dr. Pontius was a member of the American Medical Association, Arkansas Medical Society, Crittenden County Medical Society, and Alpha Omega Alpha. He served as second vice president of the State Society during 1967-68, and was a president of his county medical society. During World War II, he served as a Major in the Air Force.

Dr. Pontius was a member of Idlewild Presbyterian Church. He is survived by his wife, Mrs. Carolyn Pontius, two sons, one daughter, his mother, and one brother.

\* \* \*

### Dr. Eldon L. Caffery

Dr. Eldon L. Caffery, aged 48, of Jonesboro, died September 7th, 1972. He was a native of Athensville, Illinois.

Dr. Caffery was graduated from the University of Tennessee College of Medicine in 1947 and had been in practice in Jonesboro since 1958. He served two years in the United States Navy.

Dr. Caffery was a member of the American Medical Association, Arkansas Medical Society,

## OBITUARY

Craighead - Poinsett County Medical Society, American College of Surgeons and the South-Central Section of the American Neurological Association.

He was former Chief of Staff of St. Bernards Hospital, past chairman of the Jonesboro School Board and past chairman of the Official Board of First United Methodist Church. He was a member of the Board of Directors of the First National Bank in Jonesboro and a member of the Elks Club.

Dr. Caffery is survived by his wife, one son, one daughter, one brother, and his parents.

### Dr. William L. Wozencraft

Dr. William L. Wozencraft of Fayetteville died September 13, 1972, at the age of ninety-two.

He received his medical education at the Kentucky School of Medicine, Louisville, Kentucky, graduating in 1907. Before his retirement, Dr. Wozencraft practiced medicine in Holly Springs and in El Dorado. He was a Life Member of the Arkansas Medical Society, a member of the Washington County Medical Society, and he was a Methodist.

Dr. Wozencraft is survived by one daughter, one brother, and two sisters.



### Demonstration of Fibrin Monomers in Cord Blood

W. Kuhn et al (Universitäts-Frauenklinik, Munich, West Germany)

*Klin Wschr* 49:106-108 (Jan 15) 1971

Disseminated intravascular fibrin depositions (DIC) are frequently seen in infants dying in the perinatal period. Shock, hypoxia and acidosis seem to be of pathological significance. In 18 newborns showing signs of asphyxia, fibrin monomers were frequently observed in the cord blood. The difference in the healthy newborns was statistically significant. The occurrence of fibrin monomers seemed to be related to the duration of shock, hypoxia and acidosis.

\* \* \*

### Recurrent Hemorrhage After Acute Gastrointestinal Bleeding

T. C. Northfield (Guy's Hosp, London)

*Brit Med J* 1:26-27 (Jan 2) 1971

Recurrent hemorrhage following hospital admission is the key event in patients with acute gastrointestinal bleeding, strongly affecting prognosis with continuing medical treatment and, therefore, usually determining the decision to proceed to emergency surgery. Factors influencing this event are poorly understood. A retrospective survey has been carried out in 472 consecutive hospital admissions for acute upper gastrointestinal bleeding. Patients with a large initial bleed are more likely to bleed again than those with a small initial bleed. The incidence

of recurrent hemorrhage is also related to the time interval since the last bleeding episode, so that patients showing no clinical evidence of hemorrhage for 48 hours are unlikely to bleed again in the near future. Patients admitted following a hematemesis have a higher incidence of recurrent hemorrhage than those admitted following melena only. The incidence of recurrent hemorrhage is highest in those with esophageal varices or a chronic gastric ulcer. Age does not appear to affect the incidence of recurrent hemorrhage, nor do other constitutional factors such as sex and ABO blood group status.

\* \* \*

### Treatment of Corticosteroid-Resistant Polymyositis With Methotrexate

M. C. Sokoloff, L. S. Goldberg (Univ of California School of Medicine, Los Angeles 90024)

*Lancet* 1:14-16 (Jan 2) 1971

Seven patients with corticosteroid-resistant polymyositis were treated with intermittent, intravenous methotrexate. Five of the seven improved significantly, with improvement in muscle strength and in skin lesions, return of at least three out of four serum enzyme levels to normal or near-normal, and ability to taper prednisone without causing deterioration in the above. Toxicity attributable to methotrexate was not important. Methotrexate represents an effective, relatively nontoxic treatment of polymyositis, especially when the disease has become refractory to corticosteroids.

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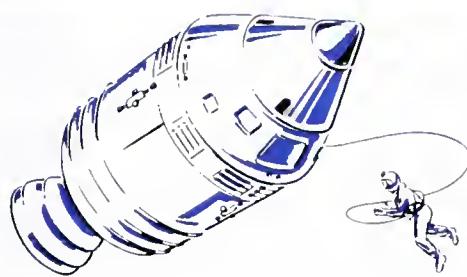
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# Cardio-Vascular Conditioning and Rehabilitation: A Mandate for Action

John E. Douglas, M.D.\*

The concept of cardiac rehabilitation through exercise stress testing, cardiovascular reconditioning, vocational rehabilitation, dietary and social psychological counseling is predicated on two major assumptions and one well documented fact. The two assumptions are (1) physical activity may retard, halt or even reverse occlusive atherosclerotic and/or thrombotic coronary artery disease; (2) physical activity may increase collateral coronary artery blood flow. The fundamental fact is: skeletal and cardiac muscle efficiency can be improved by progressive activity which calls on cardiovascular reserves. It is not our purpose here to debate their validity. However, to retain perspective it is wise to keep them in mind.

## THE CHALLENGE

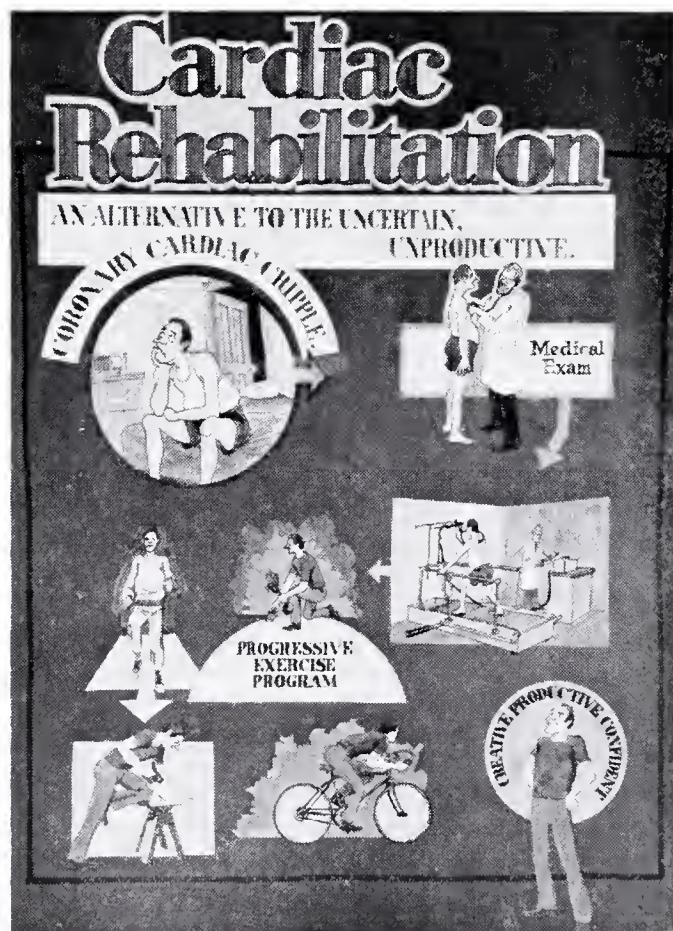
There are approximately 3.4 million citizens in the United States who are known to have coronary artery disease. Another 2.4 million are suspected of having it. These populations are directly concerned with such a program. However, if we regard our entire population in the light of the assumptions innumerated above, then all of us may have some vested interest in a cardiovascular conditioning and rehabilitation (CVC & R) program. The logistics of such boggle the mind. Initially most cardiovascular conditioning and rehabilitation programs are forced to deal with only a fraction of the motivated segment of the 5.5 million potential coronary artery disease patients, hoping that spin-off from the program may reach other segments of the total population.

## THE DIVIDENDS

Why bother with a CVC & R program? In our society where quantity so often figures above

quality, survival or the duration of life after the cardiac insult, is the final measuring stick. There is no study available which unequivocally proves altered longevity as a result of participation in a cardiovascular reconditioning program.

If our ability to change the quantity of life is in question, can a cardiovascular reconditioning program enhance the quality of the seven to ten year estimated survival time of a patient who has suffered a myocardial infarction? Since this commonly involves a subjective judgment it is difficult to evaluate. Be cautious when con-



Cardiovascular Rehabilitation, a heretofore nebulous subject, is gaining a scientific foundation. Such ground work permits a more methodical and logical progression for the would be cardiac cripple. Hopefully such programs will accelerate a patient's recovery and return to gainful employment.

\*Assistant Professor of Medicine, University of Arkansas Medical Center, 4301 West Markham, Little Rock, Arkansas 72201.

fronted by the evangelistic zeal of any new or quasi-original therapeutic regimen. "Exercise and more of it" will not prove to be the panacea. However, a program of graded exercise may provide many intangible benefits as well as several tangible ones.

#### TANGIBLE

- A. Increased endurance
- B. Increased strength
- C. Easier weight control
- D. Resumption of otherwise abandoned activities

#### INTANGIBLE

- A. Better doctor patient communication
- B. Sense of something being done and patient no longer helpless
- C. Self-confidence
- D. Education of patient, family and friends in regard to preventive measures

If sheer economic return is the measuring stick for assessing the CVC & R program, what are the potential economic dividends of such a program? Coronary artery disease strikes predominately middle-aged men at the peak time of their contribution to the national productivity. One fifth or less die with their initial infarction while 80% are left to find a place again in society.<sup>1</sup> These figures apply only to the patients who have infarcted and do not include the far more rehabilitatable patient with angina. A study in a New York population revealed that if patients did not return to work within 6 months of their initial cardiac insult 78% never returned. A Loudon study in which a cardiovascular reconditioning program was present revealed that 55% of their patients had returned to part time work within 3 months of the initial insult.<sup>2</sup> Thus restoring such a strategic population to gainful employment, if only on a half-time basis, would have many economic benefits.

#### COSTS

What is the relative costs to the patient for such a program? Generally the cost per patient participating will run between \$200 and \$1,000 dollars per year varying with the frequency and extent of the evaluation, the sophistication and kind of paramedical personnel involved. In as much as the only alternative program is no program, relatives costs are not applicable. Though considerably less expensive and certainly less hazardous than the currently prevalent saphe-

nous vein by-pass graph procedure, a cardiovascular reconditioning program need not and ideally would not be regarded as antithetical to surgical interventions. Quite the contrary the two approaches dove-tail beautifully. Stress exercise evaluations may aid in the selection of patients who may benefit most from surgery, may optimize a patient's pre-operative status, and may help evaluate the patient's response to surgery.

Thus the objectives of a cardiovascular rehabilitation program would be to accomplish the tangible and intangible dividends innumerated above. If in addition patients could return to gainful employment at their previous or a new job, that would be an extra bonus.

#### A PROGRAM OUTLINE

When should we start? For the individual who is a potential coronary artery disease patient, we ideally should start in utero. Unfortunately for pragmatic and logistic reasons this is not currently possible. Further, it is rarely possible to attack the problem in patients who are asymptomatic with normal clinical findings or asymptomatic with abnormal clinical findings. These patients rarely consult physicians because they are asymptomatic. Basically we are left with the symptomatic patient who has positive clinical findings. His initial evaluation should consist of a history including a dietary, work, recreation and exercise history, a complete physical examination with particular emphasis on the cardiovascular and pulmonary findings. Optimal and basic laboratory data should include a chest x-ray, hematocrit, hemoglobin, white blood count, cholesterol, triglycerides, electrocardiogram, urinalysis and where feasible a lipoprotein electrophoresis. Unless contraindicated, a Master Two Step Exercise Test should also be performed.\*

Inasmuch as the exercise level for a Double Masters Test is approximately 8.0 METS (that is 8 times the metabolic equivalent of the patient's basal metabolic status) other methods which permit smaller increments of physical stress have been devised. The most popular of these are the bicycle ergometer and treadmill.

Treadmill stress testing has proven more flexible for the individual patient than the Double

---

\*The protocol for a Masters Two Step Test is too controversial to discuss in the context of this paper. The appendix offers one general program and the criteria for a positive or a negative test.

Masters Exercise Test. For the detection of latent coronary artery disease or cardiac arrhythmias which do not show up on the routine electrocardiogram, treadmill and bicycle stress testing have greater diagnostic accuracy than any noninvasive cardiovascular procedure.<sup>3,4,5</sup> Treadmills are manufactured by several companies. Their prices range from slightly more than \$1,000 to \$8,000. An instrument with a one to ten miles per hour variable speed, zero to fifteen degrees variable inclination, costing less than \$2,000 is adequate for most clinics. Several models are equipped with an automatic programmer providing predetermined changes in both speeds and inclination over the patient's prescribed exercise. There are many potential programs, but for routine purposes, two to three basic programs suffice. For example, an increased incline of one degree per minute with constant speed of 3 miles per hour, or starting at 1.5 miles per hour at zero inclination increasing 0.4 miles per hour and 3 degrees incline every 2 to 3 minutes. Several different programs are available in the cardiovascular literature.<sup>6,7,8</sup>

Continuous monitoring of the patient's electrocardiogram during exercise and for eight minutes afterwards is mandatory. An electrocardiographic oscilloscope display coupled to a compatible ECG write out system is adequate under most circumstances. However, when the physician is concerned about transient arrhythmias he must either record the patient's electrocardiogram continuously to have it available for subsequent analysis, or risk missing a transient dysrhythmia if he only spot-samples. A more ideal solution is provided by an inline tape recorder which does record continuously the patient's electrocardiogram. If portions of the patient's tracing require further evaluation they can be replayed and written out at different speeds. This is particularly advantageous for evaluating a transient run of tachycardia which could be either aberrantly conducted supraventricular beats or a more ominous ventricular tachycardia.

No lead system is ideal so what lead system is optimal? A single bipolar lead system is often adequate. However, it may not provide sufficient information to discriminate aberrant supraventricular beats from ectopic ventricular beats. It also may fail to detect ST segment

changes occurring in another plane. For these reasons, we prefer to monitor two relatively perpendicular leads such as either AVF or II and either I, or V5, V6, or Frank leads X and Y. Since ST-T segment changes in the Z axis or VI-V2 leads, have as yet failed to provide additional diagnostic information, the major reasons for monitoring in this plane would be either for more refined arrhythmia analysis or for research purposes. Whatever the lead system, the electrodes need to be placed on a hairless, slightly abraded and alcohol de-oiled area relatively free from underlying muscle mass.

How long or how hard should a patient be stressed on a treadmill? The answer here must be individualized, not only on the basis of the patient's status but on the physician's experience. There are three major categories for terminating a patient's exercise: patient's symptoms, patient's blood pressure, and patient's electrocardiogram. During the initial evaluation, the onset of angina, claudication, inordinate dyspnea, fatigue, or exhaustion warrant termination of the exercise. In a normotensive patient excessive elevation of the diastolic pressure above 100 mmHg or elevation of the systolic pressure above 240 mmHg is sufficient to warrant termination of exercise. The maximum heart rate tolerated varies with age. In the initial evaluation of a patient with uncertain cardiovascular status my preference is not to allow his heart rate to exceed 160 beats per minute and generally to aim for 140 to 150 beats per minute. In an otherwise healthy individual accustomed to rather strenuous exercise, I may allow the heart rate to rise to 180 beats per minute. In the well conditioned athlete with no known medical problem, a heart rate of 210 beats per minute should be exceeded only with great caution. Such rates impinge excessively on diastolic filling time.<sup>9</sup>

Having assessed the patient's performance capacity on the treadmill, one is then better prepared to extrapolate his exercise capacity to other activities of comparable stress. Further, the patient can be advised on the optimal exercise-time/rest-time ratio. He should also be instructed about the early signs of over exertion such as evening resting pulse exceeding 20 per minute that of the morning resting pulse, and activity producing fatigue from which it takes longer than 7-10 minutes to recover. Repeated

testing may be indicated before increasing a patient's exercise level.<sup>10</sup>

#### **ISOMETRIC vs. DYNAMIC EXERCISE**

It might be advantageous to digress to review some of the differences between isometric and isotonic exercise. Isometric exercise is characterized by no motion, just a change in tension. It is epitomized by the "irresistible force straining against the immovable object." This form of exercise, when involving muscle groups of the torso, has many physiological similarities to the Valsalva maneuver. It is associated with increased peripheral resistance, increased systolic and diastolic blood pressures,<sup>9,11,12</sup> increased venous tone, increased heart rate and variable changes in cardiac output, depending on the patient's cardio-vascular reserve. Cardiac work is increased because of the afterload or blood pressure effect. In a patient with borderline myocardial function, left ventricular end diastolic pressure may be raised and subendocardial perfusion may thus be compromised. Isometric exercise is very effective for increasing strength, it has little effect on endurance.

Isotonic exercise is characterized by motion without change in muscle tension. True isotonic exercise is an idealized laboratory concept. There are few if any skeletal muscle movements that we make that don't involve a change in mechanical advantage and therein the tone necessary to perform the work, be it only moving one's hand. However, exercise which is predominately isotonic, or more realistically considered dynamic, produces the following cardiovascular responses: increased heart rate, increased cardiac output, and decreased peripheral vascular resistance with increased systolic and decreased diastolic pressures, and increased venous return.<sup>9,11</sup> These changes are not as potentially dangerous to the coronary circulation as those seen with pure isometric exercise. Inasmuch as dynamic exercise is not associated with the Valsalva-like maneuver, the adverse cardiovascular effects of this procedure are also avoided. The physiological dividend from progressive isotonic or dynamic exercise is increased endurance with little or no change in strength. If from day to day the tension is increased for a set of dynamic exercise, then strength also can be improved.

Since increased endurance and strength without undue jeopardy to the coronary flow is a major objective of a cardiovascular reconditioning program, this type of exercise program is optimal. Fortunately there are numerous forms of activity which fulfill this prescription. Patient motivation being as strategic as it is, where possible the patient should elect the activity he prefers. He should be encouraged to change activities if and when he becomes bored with his current one. If a unilateral choice is made by the physician, then the doctor must be prepared to provide continual encouragement and reward to his patient lest the activity or exercise itself be unrewarding. Too many resolutions for acquiring a good habit are broken by its tedium. This failure then confounds future attempts at establishing the habit. Ideally the patient will have several exercise activity outlets which may minimize boredom. These may range from walking, skating, dancing (round or square), light gardening and light carpentry through hiking, jogging, cycling, badminton, to running, swimming, tennis, etc.

Periodic reevaluation in the course of a rehabilitation program can help determine when a patient can begin to participate and enjoy each or any of these activities. Such a check-up may be as extensive as the initial examination. Or it may consist of merely monitoring the patient while he engages in the new activity and comparing his response to that obtained during previously prescribed stress.

A multi-disciplined team approach of clinician, nurse, dietitian, physical and occupational therapists, vocation and social-psychiatric counseling may be available in major medical centers. However, such a program is limited. Commuting distances for patients are too often too great. An interested, informed and energetic physician-nurse team can perform most of the functions required in promoting cardiovascular conditioning and rehabilitation.

In the midst of an epidemic of coronary heart disease, in a realm surrounded by so much patient anxiety, in the absence of any concerted program, some effort by our profession is mandatory.

## APPENDIX

The Double Master Two Step Test should be performed on patients who are considered to be clinically stable, who are in a fasting state and who have just had a 12 lead ECG which shows no abnormalities suggesting impending myocardial infarction. During a ten-minute rest interval prior to the exercise study, the procedure should be explained to the patient. The number of prescribed one-way trips over the two-level, 9-inch steps in a three minute interval depends on the patient's age, weight, and sex. Tables with these values are available in the literature, or upon request, from the author. During the exercise, the electrocardiographic leads may be left in place with the cable slung over the patient's shoulder. At the end of each trip, if the patient turns toward the physician to retrace his steps he will minimize his tendency to become dizzy.

After the prescribed number of trips the patient is instructed to lie quietly during the ensuing eight minutes. Five second rhythm strips of lead I, II, AVF, V5, and V6 are obtained immediately and then 2 minutes, 5 minutes and 8 minutes after completing the exercise. The appearance of multiform premature ventricular beats or ST segment depressions of 1.0 mm or greater for 0.06 seconds or longer would constitute an abnormal response by most clinicians' standards. The significance of occasional premature ventricular beats in the recovery period is unknown. The presence of either left or right bundle branch block eliminates the discriminatory ability of the ST segment. In such patients, however, a dysrhythmia may occur in response to the stress, which may have diagnostic significance.

## REFERENCES

1. Groden, T. Semple, and Shaw, G. B. "Cardiac Rehabilitation," *British Heart Journal*, Vol. 33, No. 4, July 1971, p. 425.
2. Zohman, Lenore R., and Tilbs, Jerome S. *Cardiac Rehabilitation*, 1970, Grune and Stratton.
3. McHenry, Paul, Lisa, Charles P., Knoebel, Suzanne B. "Correlation of Treadmill exercise electrocardiogram with arteriographic location of coronary disease," abs. *Am. Jour. Cardiology*, Vol. 26, p. 619, December 1970.
4. Doyle, Joseph T. and Kinch, Sandra H. "The prognosis of an abnormal electrocardiographic stress test," *Circulation* Vol. 40, No. 3, March 1970, p. 545.
5. Roitman, D., Jones, W. B., and Sheffield, L. T. "Comparison of submaximal exercise electrocardio-

gram test with the coronary cineangiogram," *Anns Int Med*, Vol. 72, No. 5, May 1970, p. 641.

6. Epstein, Stephen E., et al. "Angina Pectoris: Pathophysiology, Evaluation, and Treatment," *Anns of Int Med*, Vol. 75, No. 2, p. 263, August 1971.
7. Blomqvist, C. Gunnar. "Use of exercise testing for diagnostic and functional evaluation of patients with arteriosclerotic heart disease," *Circulation*, Vol. 44, No. 6, December 1971, p. 1120.
8. Redwood, David R., Rosing, Douglas R., Goldstein, Robert E., and Epstein, Stephen E. "The importance of the design of an exercise protocol in the evaluation of patients with angina pectoris," *Circulation*, Vol. 43, No. 5, May, 1971, p. 618.
9. Bevegard, B. Sture, and Shepherd, John T. "Regulation of the circulation during exercise in man," *Physiological Reviews*, Vol. 47, 1967, p. 178.
10. Pollock, Michael L., Miller, Henry S., Kendrick, Zebulon. "Relation of age to electrocardiographic changes after maximum stress," abs . . . *Circulation*, Vol. 44, No. 4, p. 11-75, October 1971.
11. Lind, Alexander R. "Cardiovascular response to static exercise," *Circulation*, Vol. 41, No. 2, February 1970, p. 173.
12. Nutter, Donald O., Schlant, Robert L., and Hurst, J. Willis. "Isometric Exercise and the cardiovascular system," *Modern Concepts of Cardiovascular Disease*, Vol. 41, No. 3, March, 1972.



## Lung Abscess

T. B. Barnett (Univ of North Carolina School of Medicine, Chapel Hill 27514) and G. L. Herring

*Arch Intern Med* 127:217-227 (Feb) 1971

Sixty-three patients completed medical treatment for lung abscess. Forty-three patients were, at the completion of medical treatment, without evidence of active infection and had a normal plain roentgenogram or a residual cyst-like cavity of less than 2 cm in diameter. Thirty-nine patients were examined 1 to 12 years later and only one had developed complications. Of six patients failing to meet these criteria for successful treatment, five subsequently developed recurrence of infection or hemoptysis. Tomograms or bronchograms, or both, in 30 patients showed residual cystic or bronchiectatic changes in 17 but these patients had no related symptoms. There was a highly significant correlation between an unsatisfactory outcome and both cavity size and duration of symptoms prior to treatment. Neither location of the abscess nor age of the patient significantly altered the outcome.

# Intrauterine Diagnosis Of Congenital and Genetic Abnormalities\*

Jean A. Cortner, M.D.\*\*

I was delighted to be asked to join your annual medical convention this year and to have the opportunity firsthand to observe some of the recent advances in maternal, fetal and child care that have occurred in Arkansas. Having been raised in Memphis, Tennessee, and frequented your rivers and duck blinds in the past, I am delighted to return in a somewhat more professional capacity. I say "somewhat" because the state of the art of prenatal diagnosis of genetic disorders may be somewhat more akin to my knowledge of hunting and fishing 20-25 years ago, at which time I offered little or no threat to your wildlife.

Since our assigned time together this morning is thirty minutes and I hope I correctly presume that the vast majority of the audience is practice oriented, I shall try to make a few major points which I believe are of practical significance today and speculate briefly on where this field is going. I shall not have time to go into great detail or give you the exact proof of each statement, but I will be quite willing to expand on any point made during the joint scientific sessions of the pediatricians and obstetricians-gynecologists this afternoon.

First, let us attempt to define intrauterine diagnosis and treatment of the fetus. Broadly speaking, this includes any diagnostic procedure and direct or indirect therapy resulting in improved health of the fetus or abortion. There are two main areas of consideration: (1) third trimester sampling of amniotic fluid for the purpose of diagnosing and treating the seriously affected Rh-sensitized infant or diagnosing a "maturity level" that can give some assurance that the prematurely born child may not be affected by hyaline membrane disease; and (2) second trimester diagnosis of fatal or maiming inherited disorders which can be prevented by interruption of pregnancy. We will concentrate entirely on this latter group today.

The procedure involved (Figure 1) is trans-

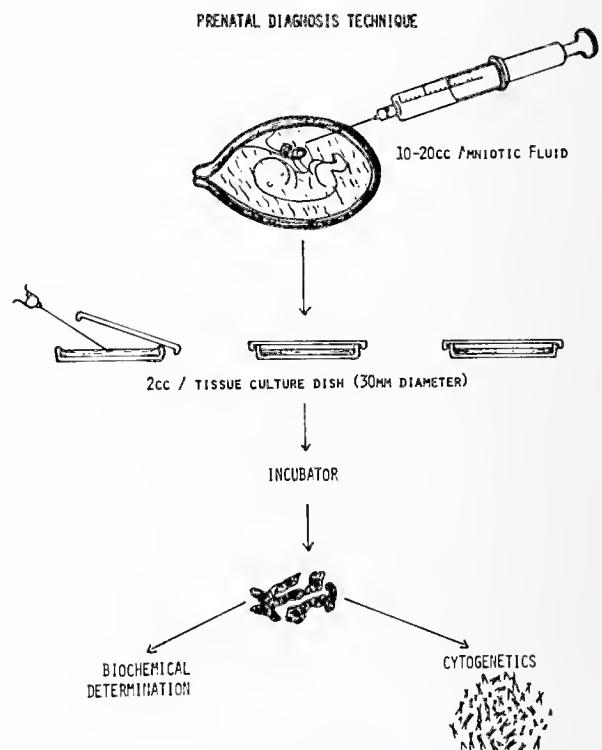


Figure 1.

abdominal amniocentesis. Cells and fluid are removed and may be examined before or after *in vitro* culture. The optimum time for consistent cell growth is during the 16th and 17th weeks of gestation. At this time, 175-250 ml. of amniotic fluid is present and removal of 15-20 ml. apparently produces no untoward effect on fetus or mother. The method utilized by Dr. Ronald Davidson at our institution involves dividing the specimen among several petri dishes and initial culture in the original amniotic fluid for ten days to two weeks. Subsequently, an appropriate tissue culture media supplemented with 20% fetal calf serum is substituted and cells are grown in adequate numbers for chromosomal examination and biochemical testing as indicated. Although in the future measurement on the initially obtained amniotic fluid of certain metabolites may provide a more rapid diagnosis, the practical use of the fluid today involves specific testing of the tissue culture cells grown from the initial amniotic fluid.

Let us back up briefly and discuss the characteristics of amniotic fluid obtained at the 16th to 18th week of gestation. Animal studies com-

\*Presented at the 96th Annual Session, Arkansas Medical Society, April 25, 1972, Hot Springs, Arkansas.

\*\*Professor and Chairman, Department of Pediatrics, State University of New York at Buffalo, School of Medicine, Buffalo, New York.

paring nephrectomized and non-nephrectomized fetuses indicate that it is not urine. Where else could it come from? The skin, umbilical cord, lungs, gastrointestinal tract and chorioamnion. Without giving you all of the evidence, the best understanding to date suggests that up to 20 weeks of gestation the amniotic fluid is basically an extension of the extracellular space of the fetus. Up to this time, electron microscopic studies of the skin show widely open extracellular spaces which look somewhat like renal tubules under the influence of vasopressin. After 20-22 weeks, the skin of the fetus begins keratinization and the characteristics of the amniotic fluid change. Suffice it to say that in the early second trimester when amniocentesis is performed for genetic diagnosis, it is basically fetal extracellular fluid containing at least two types of cells, epithelial and fibroblastic. These cells are of fetal origin and are shed by the fetus into the amniotic fluid. During tissue culture, it is the fibroblastic cells that survive. There are three major areas of testing which can be applied to these tissue culture cells: (1) sex determination by demonstrating the presence of a Barr body in female cells and the fluorescent Y chromosome material in male cells; (2) a chromosomal karyotype; and (3) direct biochemical enzymatic assessment.

Now let us discuss those conditions that are amenable to prenatal diagnosis using these three methods. First, the sex of the fetus. There are a number of conditions that are known to be inherited on an X-linked basis and therefore only males are affected. Muscular dystrophy is a good example. There is no way as yet to diagnose muscular dystrophy from the study of cultured or uncultured amniotic fluid cells. However, if a woman has already had one child with disease or if biochemical tests such as creatinine phosphokinase activity indicate with high probability that she is a carrier, she and her husband may decide that they are not willing to risk having an affected male and may have the pregnancy terminated if a male fetus is present. Should amniocentesis demonstrate that the fetus is a female, the parents can be reasonably certain that the child will not have muscular dystrophy and the pregnancy need not be interrupted. Eventually, a biochemical test such as that for X-linked hyperuricemia or the Lesch-Nyhan syn-

drome may be developed to detect muscular dystrophy and other X-linked diseases in the cultured cells. In the meantime, this is all that can be offered to parents at risk for a hemizygous affected male with X-linked inherited disorders such as Duchenne's muscular dystrophy.

Detection of chromosome anomalies at the moment and for the foreseeable future represents the major indication for amniocentesis in the first half of pregnancy. The most frequently encountered high-risk pregnancies are associated with Down's syndrome. Risk situations may be considered in three groups. First, it is known that women over 40 years of age are at increased risk of producing a child with mongolism. This is in the order of one affected to fifty unaffected children. Many physicians feel that amniocentesis is indicated for all women over 35 years of age. In any case, decision to undergo amniocentesis must be left to the parents after careful consideration and discussion of the risk, both of the disorder and the procedure, and including the implications of termination of pregnancy by abortion. Secondly, mothers who have previously borne a child with trisomy-21 are at increased risk of bearing a second such child, even though the reason for this increased risk is not understood. Thirdly, approximately 5% of patients with Down's syndrome do not have trisomy-21 but rather have 46 chromosomes, one of which bears a 21 translocation, giving the effect of a partial 21-trisomy. In such cases, the theoretical risk in subsequent pregnancies of an affected live offspring is 1 in 3. In practice, however, the actual risk is considerably less for unknown reasons. When the mother is the trisomy carrier, the risk is in the order of 1:10, and when the father is the carrier the risk is less than 1:20. Chromosomal analysis of tissue culture cells obtained from amniocentesis in the early second trimester can completely eliminate this risk if the parents are willing to interrupt such a pregnancy and it is available to them.

Finally, diagnosis of inborn errors of metabolism by specific testing of the tissue culture cells for the particular enzymatic defect is a reality for many genetic conditions today and of great promise for many more in the future. Let me use an example that almost all of you will have heard of but few of you will have seen since medical school, that is, Tay-Sachs disease. This

is a progressive, fatal degenerative disorder of the central nervous system characterized by intracellular accumulation of GM2 gangliosides and an autosomal recessive pattern of inheritance. It is particularly common among Ashkenazi Jews with a frequency of about one in 3600 live births. Recently, the disease has become understood to be associated with an abnormality of hexosaminidase. Two distinct forms, A and B, of this lysosomal enzyme,  $\beta$ -D-N-acetyl hexosaminidase, are present in normal tissues and can be made visible by several staining procedures after electrophoresis. Form A is absent or markedly decreased in cells of various origin obtained from patients with Tay-Sachs disease. In the genetics laboratory of the Children's Hospital of Buffalo, Drs. Mario Rattazzi and Ronald Davidson developed a cellulose gel acetate electrophoresis technique with which the bands of hexosaminidase activity can be made visible and directly measured. After electrophoresis, the bands are made visible by fluorescence using a fluorogenic substrate and the activity can be quantitated using a fluorometer. Figure 2 compares the cell extracts prepared from cultured skin fibroblasts from a normal individual and from the patients with Tay-Sachs disease. The absence of band A in the patient on the right is clearly evident. Utilizing this technique, Drs. Davidson and Rattazzi have monitored four pregnancies of parents known to be at risk of having one out of four children affected by the

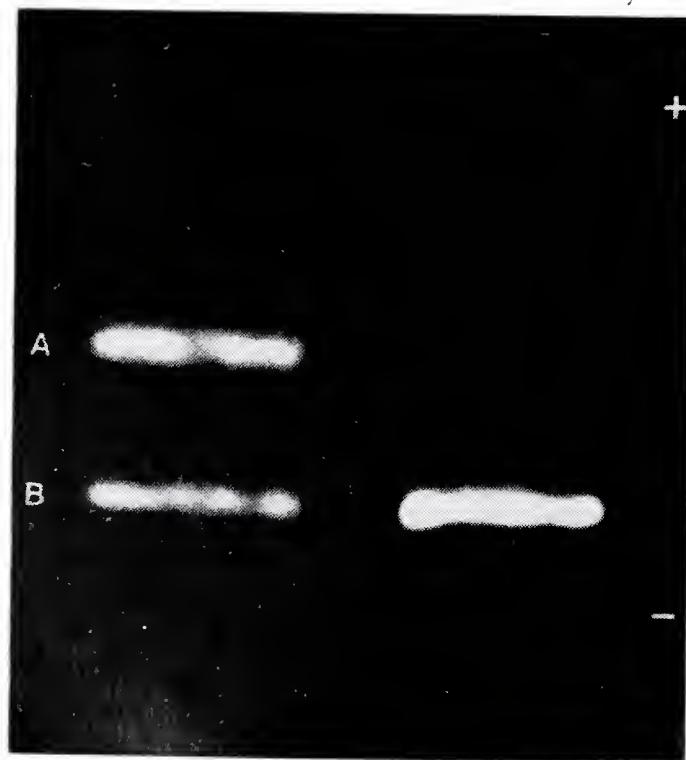


Figure 2.

disease by virtue of the fact that they had already had one affected child.

Table I prepared by Drs. Davidson and Rattazzi for publication in CLINICAL CHEMISTRY, Vol. 18, No. 3, 1972, illustrates that there are currently 47 known metabolic diseases with a recognizable phenotype in cultured fibroblasts which either have been or now can be diagnosed in the second trimester of pregnancy for those parents known to be at risk by virtue of already having had an affected child. It is clear from the rapid progress made in recent years that most inherited metabolic diseases will ultimately be preventable. In order to have a meaningful effect on the mortality and morbidity associated with such disorders, parents at risk will have to be determined by biochemical testing. While this may not be economically feasible for extremely rare disorders, such conditions as cystic fibrosis of the pancreas which cause serious morbidity and ultimate mortality in large numbers of children each year may ultimately be eradicated by such procedures. I would remind you that to date the tissue culture diagnosis of cystic fibrosis by the demonstration of metachromasia in the cultured cells is not a specific enough method to be employed for prenatal diagnosis.

In conclusion, it can be said that intrauterine diagnosis has provided a very exciting and potentially powerful tool for improving the accuracy of genetic counseling. However, before this technique is widely applied, much more basic information in various fields is necessary. For each enzyme studied to provide the basis for prenatal diagnosis, normal values in both cultured and uncultured amniotic fluid cells must be clearly established and, wherever possible, qualitative techniques developed. If the patient with the particular disease under investigation is not available, his parents should be investigated as carefully as possible from a biochemical standpoint in order to minimize the chance of genetic heterogeneity affecting the correct interpretation of the amniotic fluid cell results. The presence of unique fetal isozymes must be ruled out in each enzyme system and the possible artifactual effects of *in vitro* culture techniques eliminated. Even when the "science" of amniocentesis becomes routinely established, we will still be faced with significant ethical considerations that are obviously beyond the scope of this presentation.

**Table I. Metabolic Diseases with a Recognizable Phenotype in Cultured Fibroblasts**

Disorders	Mode of inheritance	Deficient enzyme activity or other cell culture phenotype	Disorders	Mode of inheritance	Deficient enzyme activity or other cell culture phenotype
<i>Disorders of lipid metabolism:</i> (51)					
Gaucher's disease	AR	glucocerebroside β-glucosidase	Hyperlysinemia	AR	lysine-ketoglutarate reductase
Niemann-Pick disease (52)	AR	sphingomyelinase	Hypervalinemia	AR	valine transaminase
Krabbe's globoid cell leukodystrophy (53)	AR	galactocerebroside β-galactosidase	Ketotic hyperglycinemia	AR	propionyl Co A carboxylase
Metachromatic leuko-dystrophy			*Maple syrup urine disease	AR	branched chain keto acid decarboxylase
*Late infantile type	AR	arylsulfatase A	*Methylmalonic aciduria	AR	methylmalonyl Co A isomerase
Juvenile and adult type (45)	AR	partial deficiency of arylsulfatase A			
Rare variant (46)	AR	total arylsulfatase deficiency			
Ceramide lactoside lipidoses (54)	AR	lactosyl ceramidase	<i>Disorders of carbohydrate metabolism:</i>		
Fabry's disease	XL	α-galactosidase	Fucosidosis	AR	α-fucosidase
*Tay-Sachs Disease (GM <sub>2</sub> gangliosidosis, type I)	AR	hexosaminidase A	Glycogen storage disease	AR	α-1,4-glucosidase
Juvenile Tay-Sachs disease (40) (GM <sub>2</sub> gangliosidosis, type II)	AR	partial deficiency, hexosaminidase A	*Type II	AR	amylo-1,6-glucosidase
Sandhoff disease (41)	AR	hexosaminidase A and B	Type III	AR	branching enzyme
Generalized gangliosidosis (GM <sub>1</sub> gangliosidosis)	AR	β-galactosidase	Type IV	AR	galactose-1-phosphate uridyl transferase
Wolman's disease (55, 56)	AR	acid esterase; increased cholesterol	*Galactosemia	AR	glucose-6-phosphate dehydrogenase
Refsum's disease	AR	phytanic acid α-hydroxylase	Glucose-6-phosphate dehydrogenase deficiency	AR	glucose-6-phosphate dehydrogenase
<i>Mucopolysaccharidoses:</i>			Mannosidosis	AR	α-mannosidase
*Hurler's syndrome	AR	specific β-galactosidase, accumulation of mucopolysaccharide	Pyruvate decarboxylase deficiency	AR	pyruvate decarboxylase
Hunter's syndrome	AR	? β-galactosidase, accumulation of mucopolysaccharide	<i>Miscellaneous:</i>		
I-Cell disease (57)	AR	cytoplasmic membrane-bound inclusions	Acatalasemia	AR	catalase
Sanfilippo disease	AR	accumulation of mucopolysaccharide	Adrenogenital syndrome	AR	failure of C <sub>21</sub> , C <sub>11</sub> , or steroid hydroxylation
<i>Amino acid and related disorders:</i>			Chediak-Higashi syndrome	AR	cellular inclusions
Argininosuccinic aciduria	AR	arginosuccinate	Congenital erythropoietic porphyria	AR	cosynthetase
Citrullinemia	AR	argininosuccinic acid synthetase	Lesch-Nyhan syndrome	XL	hypoxanthine guanine phosphoribosyl transferase
Cystinosis	AR	cystine accumulation	Lysosomal acid phosphatase deficiency	AR	lysosomal acid phosphatase
Homocystinuria	AR	cystathione synthase	Myotonic muscular dystrophy (58)	AD	alkian blue-positive granules
Hyperammonemia, Type II	AR	ornithine carbamyl transferase	Orotic aciduria	AR	orotidylid pyrophosphorylase and decarboxylase
			Xeroderma pigmentosum	AR	DNA "repair" enzyme

\*Prenatal diagnosis has been made.

AR = autosomal recessive.

AD = autosomal dominant.

XL = X-linked recessive.

References supplement those listed in ref. 3, Table 1, pp 1372-1377, and refer either to additional diseases or more recent publications.

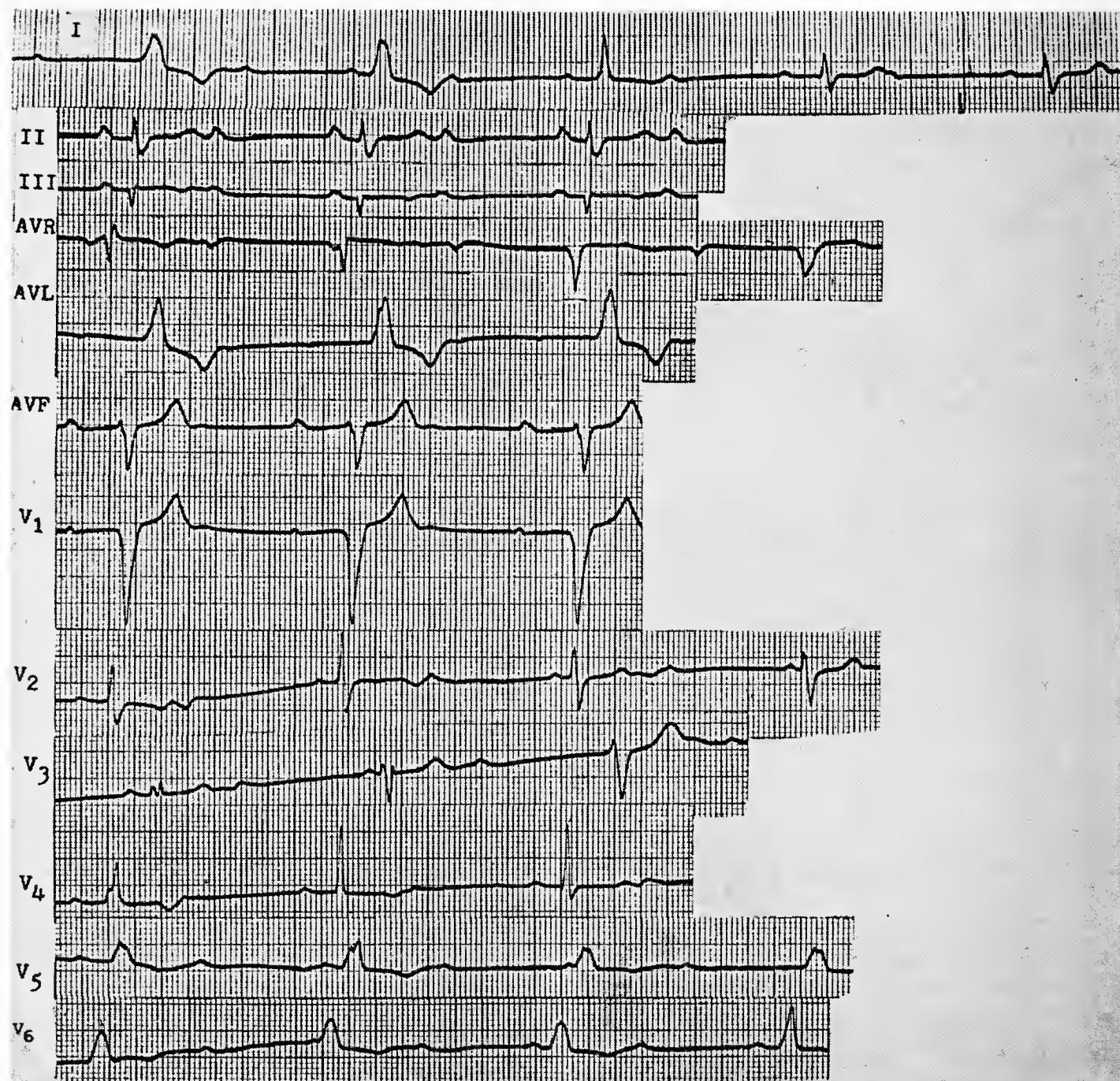
# ELECTROCARDIOGRAM

# OF THE MONTH



65-year-old white female: February 14, 1972.  
Complete Heart Block "documented by ECG in 1965."

(See Answer on Page 189)



J. Douglas, M.D., Assistant Professor of Medicine  
University of Arkansas Medical Center  
4301 West Markham  
Little Rock, Arkansas 7205



Jerry C. Holton, M.D.\*

This 16 year old white female was admitted to the hospital with a four day history of fever and weakness. Pertinent physical findings on admission reveal the patient to be under-developed for her age including retarded sexual development. Weight: 82½ lbs. Ht: 5'4". Temp. 102.8°. Resp. rate: 22. Pulse: 100. There were extensive rales over both upper lung fields with clubbing and cyanosis of the fingers. Pertinent past history revealed that this patient has had a chronic cough for three to four years with production of discolored sputum each day. She has had multiple respiratory tract infections within the past five years.

**DIAGNOSIS:** Cystic fibrosis of the pancreas. (Fibro-cystic disease of the pancreas; pancreatic fibrosis; and mucoviscidosis.)

**DESCRIPTION OF DISEASE ENTITY:** Cystic fibrosis of the pancreas is a hereditary disease of children, adolescents, and young adults due to a generalized dysfunction of exocrine glands. In 1953, it became evident that cystic fibrosis affects many and perhaps all exocrine glands, mucous producing and others. The basic defect in cystic fibrosis is still unknown. It appears to be genetically transmitted, although there is no consensus as the mechanism of trans-



\*Radiologists, P.A., 318 North Greenwood, Fort Smith, Arkansas 72901.

mission. In the United States, it is believed that there is an autosomal recessive form of transmission. Cystic fibrosis, therefore, is not a disease limited to the pancreas but is one in which this organ is frequently involved. Generalized bronchial obstruction with secondary infection is a cardinal manifestation of the pulmonary involvement. The ecrine sweat defect is characteristic of cystic fibrosis in the pediatric age group and is not seen in any other pediatric disease except adrenal cortical insufficiency. In 99% of patients with cystic fibrosis, the level of chloride and sodium in sweat is increased. Bronchial and bronchiolar infection is secondary to the obstructive process but increases the intra-bronchial obstruction by increasing the accumulation of secretions and purulent exudate. Chronic pulmonary disease is characterized by chronic cough, wheezing, thick tenacious sputum, and repeated respiratory tract infections are the hallmarks of the disease in both children and adults. With irreversible damage to the bronchi,

the pulmonary disease becomes progressive and leads to the distressing picture of pulmonary insufficiency and eventually death through such complications as lobar atelectasis, lung abscess, cor pulmonale, pulmonary hypertension, mediastinal and subcutaneous emphysema, pneumothorax, hemoptysis, and asphyxia. Radiographic findings include bilateral bronchopneumonia of variable degree and extent, generalized bilateral obstructive emphysema, and in some cases bronchial lumens are surrounded by thick cuffs of increased density. Great numbers of small abscesses have been found in the pulmonary and bronchiectatic areas that cause the fine and coarse stippling of the lungs. Some of the peri-bronchial abscesses rupture into the bronchial lumens discharging their pus therein and then give rise to the "cystic" lesions of various sizes when they fill with air. Chronic emphysema in children is found almost exclusively in those suffering from cystic fibrosis of the pancreas and atopic asthma.



## NEW MEMBERS

### **Dr. Garland U. Jamison, Jr.**

Dr. Garland U. Jamison, Jr., is a new member of the Miller County Medical Society. He is a native of Texarkana, Texas.

Dr. Jamison received his A.B. degree from the University of Illinois in 1931 and was graduated from the University of Illinois College of Med-

icine, Chicago, Illinois, in 1937. His internship was completed at Homer Phillips Hospital, St. Louis, Missouri. Dr. Jamison has been in practice in Texarkana for thirty-five years. His office, for the general practice of medicine, is located at 610 Hazel Street in Texarkana.

### **Dr. John Franklin Riddle, Jr.**

The Pulaski County Medical Society has recently added the name of Dr. John F. Riddle, Jr., to its membership roll.

Dr. Riddle was born in Cairo, Georgia. He attended the University of Arkansas and then entered the University of Arkansas School of Medicine, from which he was graduated in 1961. Dr. Riddle interned at Arkansas Baptist Hospital in Little Rock. Since 1962, he has been in practice as a family physician at 8824 Chicot Road, Little Rock.



## Rabies In Arkansas 1972

Harvie R. Ellis, D.V.M.\*

**A**nimal rabies in Arkansas for the first six months of 1972, remains approximately the number reported for the same period during the previous year. More counties located near the central part of the state that reported no animal rabies in 1971, are now reporting cases. This means that the problem has extended from the northern and western counties into the central areas of Arkansas. A few isolated cases are being tabulated for south Arkansas.

Wildlife rabies accounts for over 50% of all reported cases of animal rabies in Arkansas. Since wildlife rabies is so deeply seeded in the skunk population of Arkansas, it becomes imperative to continue rabies control programs for pet animals and livestock. There is a pressing need for more information about the epizootiology of wildlife rabies and more effective methods for controlling the disease in the various wildlife species.

Many animal bites from rabid or suspected rabid animals, occur to humans each month in our state. These exposure problems involve pet animals, the various wildlife species, and livestock. Public health authorities in Arkansas conduct continuous educational programs on all matters pertaining to human animal bite exposures. These exposures to humans can be very involved, or complicated, and they do generate a large amount of discomfort and anxiety to the victims.

In several communities just plain "vicious dogs" have contributed to a number of serious situations. These "vicious dog" events usually involve German Police dogs that have attacked

children and occasionally adults. The victims require medical treatment and the offending animals must be placed under observation and confinement as required by the Rabies Control Act, Act 11. Legal or police action may become necessary when owners of vicious dogs refuse to fully cooperate. Many states have enacted purely "vicious dog" legislation that includes dogs, cats, and exotic pets. The uncooperative action of pet owners has been the direct cause for a great deal of comment on this subject in Arkansas. Indications are that the public will soon demand strict laws regulating owners of vicious pet animals.

Effective rabies control programs are aimed at the host involved; domestic pet animals, wild animals, and human beings. The control of rabies in domestic pet animals can be accomplished in any community, city, or county by initiating and then maintaining a program of removal of strays or unwanted animals and vaccinations. Wildlife rabies is more difficult to control.

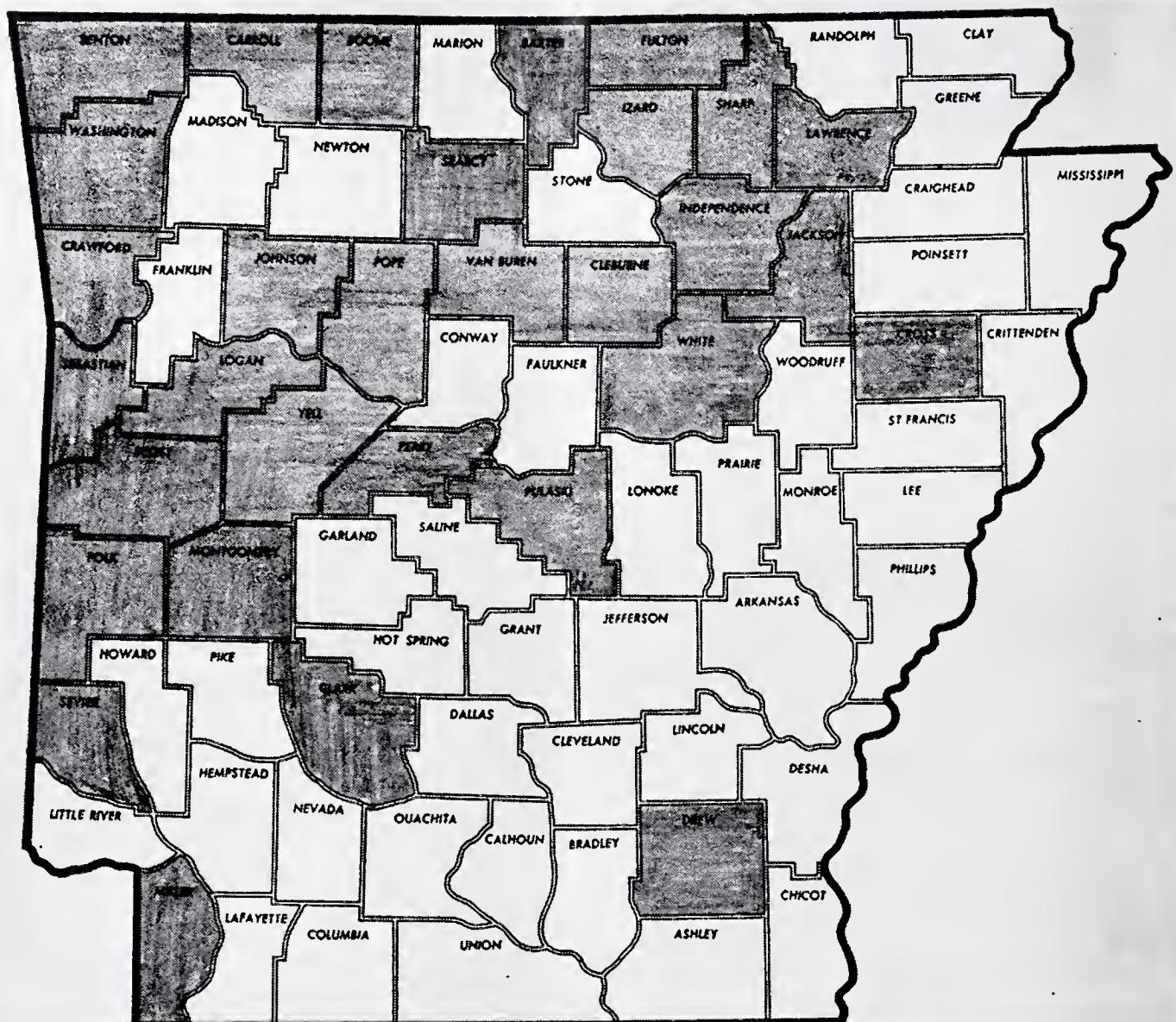
The only method we have in control of rabies in foxes, skunks, and other terrestrial animals, is the selective reduction of the population of the species involved. This system requires many, many manhours of work and ample funds to implement. In man, rabies can be prevented by eliminating exposure to rabid animals and by a combination of local wound treatment and immunization when exposed.

The low frequency of reactions to the duck-embryo rabies vaccine has made it more practical to engage in pre-exposure immunization

\*Arkansas State Department of Health, Division of Veterinary Public Health, 4815 West Markham, Little Rock, Arkansas 72205.

**ARKANSAS PUBLIC HEALTH AT A GLANCE**

**ARKANSAS STATE DEPARTMENT OF HEALTH**  
**Division of Veterinary Public Health**



The shaded portions of this map indicate the counties that have reported one or more cases of rabies during 1972.

of persons in high-risk groups; veterinarians, animal handlers, certain laboratory workers, and individuals whose activities result in frequent contact with dogs, cats, foxes, skunks, or bats should be protected by pre-exposure prophylaxis.

The State Hygienic Laboratory, Arkansas State Department of Health, Little Rock, Arkansas, conducts the examination of all animal heads suspected of having rabies and distributes approved special containers for shipping the severed heads by commercial bus lines.

The shaded map indicates the counties that have reported one or more cases of animal rabies in 1972. A tabulation for the past five years by animal species, documents the animal most often reported as being rabid.

**ANIMAL RABIES IN ARKANSAS**

(8 months)

SPECIES	1968 CASES	1969 CASES	1970 CASES	1971 CASES	1972 CASES
Bat	5	5	4	8	4
Bobcat	1	—	1	1	—
Cat	1	1	2	9	3
Cattle	11	4	26	16	16
Dog	4	4	6	5	3
Fox	2	6	10	10	3
Goat	—	—	1	1	—
Horse	—	—	2	1	1
Raccoon	—	—	—	1	—
Skunk	41	24	22	86	52
Swine	—	—	—	1	—
Wolf	—	—	1	—	—
TOTAL	65	44	75	139	82



## EDITORIAL

# Disruption of Abdominal Wounds In a 100 Bed Community Hospital

W. E. Jennings, M.D.\*

This grave complication of abdominal surgery may follow any abdominal procedure, in patients of either sex or any age. It presents many problems and carries a definite mortality rate which varies considerably in reported series of cases.

Our series of cases consists of 3,811 consecutive laparotomies done at Rogers Memorial Hospital prior to July 1, 1972. During this time there were twenty-eight eviscerations treated at this hospital. All were treated by immediate re-closure of the abdominal wall with through and through, all layer, sutures of stainless steel wire. There were two deaths in this series. Our incidence of disruption was 0.73% and our death rate among our disrupted wounds was 7%. These figures compare favorably with reported series from all over the world. A careful study of the literature suggests that this complication occurs in from about 0.5% to about 3% in various series of comparable size. The death rate in comparable series of cases from about 5% to 25% with an overall average of 10%. A careful evaluation of our two deaths reveals that both patients would probably have promptly expired had their wounds not disrupted and it is the opinion of this author that if all deaths in all series were analyzed, this would be a common finding.

The cause of this complication in many cases is not clear. The average age of our patients was fifty-seven with only fourteen or 50% being over the age of sixty. The youngest patient was nineteen and the oldest was eighty. Eighteen of our patients were males and ten were females.

\*1040 West Walnut, Rogers, Arkansas 72756.

Thirteen had upper abdominal incisions all of which were either right or left rectus, muscle retracting type. Fifteen had lower abdominal incisions, two of which were transverse, the other being either midline or muscle retracting rectus incisions. Seven of our patients had undergone surgery for carcinoma; six patients had operations upon their colon; there were seven hysterectomies; five cholecystectomies, seven operations on the stomach and duodenum, one pancreatic operation and two appendectomies. Sixteen of our patients had been closed primarily with catgut and twelve with non-absorbable materials.

It is our opinion that the prevention of this severe complication of abdominal surgery depends on many things including the skill of the anesthetist, who by his talents can diminish coughing and vomiting and can provide relaxation for easy approximation of tissues. The surgeon must be very careful in technique in carefully and tenderly handling tissues and in approximating but not strangulating them. He must eliminate dead space and remember the requirements of his patient for Vitamin-C and protein. He must do everything in his power to prevent abdominal distention and straining of the patient during the postoperative period.

### REFERENCES

- Tashiro (SG&O, 78:487, 1944)
- Wolff (American Journal of Surgery, 131:534, 1950)
- Joergenson and Smith (American Journal of Surgery, 79:282, 1950)
- Tweedie and Long (SG&O, 99:41, 1954)
- Hartzel et al. (JAMA, 116:669, 1941)
- Maingot (Abdominal Operations, 1961)

## M E D I C I N E   I N   T H E



### Decision to be Made on "Talwin"

The Arkansas Medical Society and the Arkansas Pharmaceutical Association have asked that the drug "Talwin" (manufactured by Winthrop Laboratories) be included in the State Controlled Substances Act under a schedule that includes amphetamines and barbiturates. The drug has been described as mildly addictive and has reportedly been abused in Arkansas.

The State drug coordinator, Mr. Frank Wilson, said a decision on whether or not to include the drug in controlled substances schedules would be made in about sixty days.

\* \* \*

### COUNCIL MINUTES

The Council of the Arkansas Medical Society met at 10:00 A.M. on Sunday, September 24, 1972, at the Holiday Inn in Pine Bluff. Present were: Long, Watson, Wood, Shuffield, Saltzman, D. Gray, Irwin, Burge, Jameson, Kemp, Harris, Orr, Kolb, Henry, Kirby, Koenig, Ellis, P. Smith, Townsend, Hyatt, James Weber, James Dennis, J. A. Harrel, George Mitchell, Edgar Easley, Mrs. Edgar Easley, Senator and Mrs. W. D. Moore, Mr. Frederic André, Mr. Warren, Mr. Schaefer, Mr. Rainwater and Miss Richmond.

The Council transacted business as follows:

1. Upon motion of Saltzman and Kolb, the Council approved actions taken by members of the Council as "Committee of the Whole" on August 13, 1972.
2. The Council voted, by motion of Orr and Kolb, to appoint R. Fred Broach to the Professional Services Review Organization to replace Dr. Busby for a term expiring in April 1973.
3. Koenig presented the name of Boyce West of Clarksville as the councilors' nominee for the vacancy on the Tenth Councilor District Professional Relations Committee. Upon motion of Koenig and Saltzman, the appointment was approved by the Council.
4. A member of the Insurance Committee, James Weber, presented a proposal for a liability insurance plan for Society members as received from the Aetna Insurance Company. The Council voted, upon motion of Koenig and Kemp, to receive the proposal for information, to thank the committee for its objective review and presentation, and to notify Aetna that the Council sees no reason to make a recommendation for changing from our present carrier.
5. Upon motion of Koenig, the Council voted to withhold any action on the Family Health Center Project of the United States Public Health Service pending presentation of a specific proposal on which action could be taken, with the provision that the Executive Committee act on requests for approval in lieu of a Council meeting.
6. The Council voted, by motion of Orr and Saltzman, to approve the annual report of audit of the Arkansas State Medical Board. Robert Watson requested that minutes reflect his suggestion that some of the funds in the Board checking account be put into some type of interest-bearing account. Mr. Warren requested that the record show that the amount shown in the report of "attorneys fees" actually included all costs of investigation, fees of court reporter, etc., for all cases handled by the Board's attorney.
7. Upon the motion of Koenig, the Council voted to authorize expenses for Mr. Warren to attend an AMA seminar on Price Commission regulations rather than send a representative to a Government sponsored seminar in Houston in October.
8. The Council voted to approve a decision by the Annual Session Committee to schedule a golf tournament during the 1973 annual session, provided no awards are presented during the inaugural banquet. Motion was by Saltzman and Kolb.
9. Upon motion of Orr and Koenig, the Coun-

cil authorized expenses for Mr. Warren to attend a legal workshop in Cincinnati in November.

10. Upon motion of Koenig, the Council voted to restrict listings in the Physicians' Directory section of the Journal to members of the Arkansas Medical Society.
11. J. A. Harrel of the State Health Department requested approval of the Council of a proposal that Talwin be changed from a "non-scheduled" to a "scheduled" drug. Upon motion of Kolb, the Council voted to approve the proposed change.
12. C. R. Ellis discussed plans for the physician-

clergy conference October 28th, which is being co-sponsored by the Society's Committee on Medicine and Religion. Upon motion of Saltzman and Irwin, the Council voted to authorize up to \$300 to cover expenses for the meeting.

13. Elvin Shuffield advised that he had been asked to serve on a committee to work with the Governor on the budget for the Public Health Department and requested the approval of the Council. Upon motion of Kemp, the Council unanimously approved.

APPROVED: G. C. Long, M.D.  
Chairman of the Council



## THINGS TO COME

### Society's Winter Meeting Scheduled

The Winter Meeting of the Arkansas Medical Society will be held Sunday, December 3rd, at the Sheraton Hotel in Little Rock.

Committee meetings will be held from 8:30 a.m. to 12:00 noon. There will be a 12:00 noon luncheon, followed by the House of Delegates meeting at 1:30 p.m. The meeting is expected to adjourn at approximately 3:30 p.m.

Committee chairmen, wanting to set up meetings, are reminded that Paul Rainwater, of the headquarters staff, is available to help contact committee members.

### ANSWER—Electrocardiogram of the Month

This tracing demonstrates intermittent 2:1 A-V block and atrio-ventricular dissociation and ventricular escape beats. Occasional fusion beats as seen in the 3rd beat of Lead I, are present. When conducting 2:1, the intra-ventricular conduction pattern appears to demonstrate diffuse delay, primarily in the left anterior bundle branch, though some degree of tri-fascicular block must be present. This same arrhythmia was present in 1965. Although it reflects a high degree of Mobitz II block, it is not true third degree heart block or "complete heart block."

Annual  
James Sherwood Taylor  
Lectureship  
of the  
Arkansas Heart Association  
Dr. Arnold M. Weissler  
Professor and Chairman  
Department of Medicine  
Wayne State University  
Detroit

*"Non-Invasive Assessment of  
Left Ventricular Function"*  
4 p.m., December 7, 1972  
Auditorium

University of Arkansas Medical Center

### Letter of Appreciation

The family of the late Dr. R. C. Lewis is profoundly grateful to many friends for the kind deeds, visits, flowers, telegrams, cards and many other tangible expressions of sympathy during its recent hours of bereavement. A special thanks to persons who sent memorial contributions in memory of Dr. Lewis' dedication and service to the medical profession and humanity.

Respectfully,  
Mrs. R. C. Lewis, Sr.  
Mr. and Mrs. R. C. Lewis, Jr.  
Dr. and Mrs. B. A. Lewis



## PERSONAL AND NEWS ITEMS

### Physicians Attend Meeting

Dr. Amail Chudy of North Little Rock and Dr. Ross Fowler of Harrison attended the national meeting of the American Academy of Family Physicians in New York City in September. Dr. Chudy served as a delegate for the State of Arkansas.

### Dr. Tucker Re-locates

Dr. Charles L. Tucker has joined the staff of Medical Surgical Associates in Salem. Dr. Tucker, a family practitioner, was formerly in practice in Ash Flat.

### Dr. Mahoney Announces New Associate

Dr. Paul L. Mahoney, Jr., of Harrison announces the association of Dr. Thomas J. Simpson with him in the practice of obstetrics and gynecology.

### Physician Serve As Chairman

Dr. Omer Bradsher of Paragould served as Chairman of the Citizens for Blaylock Committee, the Statewide organization which conducted Len Blaylock's campaign for Governor.

### Dr. Williams Named Fellow

Dr. J. P. Williams, Jr., of Brinkley, was installed as a Fellow of the American Academy of Family Physicians during the Academy's annual meeting September 25-28, 1972, in New York.

### Physicians Named Diplomates

The following physicians have been named Diplomates of the American Board of Family Practice: Dr. James D. Armstrong, Ashdown; Dr. Omer E. Bradsher, Paragould; Dr. C. Randolph Ellis, Malvern; Dr. Rex N. Moore, Jacksonville, and Dr. Paul Wallick, Monticello.

### Speakers Bureau

The Speakers Bureau of the Arkansas Medical Society has provided guest speakers for numerous groups and civic clubs in recent months. The following physicians are participating in the Speakers Bureau and have filled speaking engagements: Dr. George H. Collier, Jr., of Paragould, who spoke to the University Heights Lions Club in Jonesboro on the subject of "Venereal Disease"; Dr. Joe Verser of Harrisburg who spoke to the Trumann Lions Club on "The Cost of

Medical Care"; Dr. Charles A. Taylor of Batesville spoke to the Heber Springs Optimist Club; Dr. James L. Dennis of Little Rock spoke to the Downtown Hot Springs Rotary Club on the "University of Arkansas Medical School"; Dr. W. M. Wells of Heber Springs spoke to the Augusta Rotary Club; Dr. W. W. Workman of Blytheville spoke to the Trumann Lions Club on "The Years After Forty"; Dr. Henry G. Hearnsberger of Little Rock spoke to the Cleburne County Extension Homemakers Council on "Mental Illness"; and Dr. R. H. Chappell of Texarkana spoke to the Stamps Rotary Club on "Socialized Medicine and You".

### Dr. Scurlock Named Chief of Staff

Dr. William R. Scurlock of El Dorado has been elected Chief of Staff of Warner Brown Hospital. Dr. Scurlock succeeds Dr. Kenneth Duzan.

### Physicians' Office Entered

The office of Dr. J. Warren Murry and Dr. Jack A. Wood at 1749 North College, Fayetteville, was broken into on September 30th. It was the second time in two weeks that the office had been entered.

### Physician Announces New Associate

Dr. Van Smith announces the association of Dr. W. Pepper Ashford with him in the practice of Internal Medicine at the Diagnostic Clinic in Harrison.

### Clinic Adds Physician to Staff

Dr. Joe D. Daugherty has joined the staff of Dickinson Clinic in DeQueen.

### Physicians Guest Speakers

Dr. G. Doyne Williams and Dr. Robert Bulloch, of the University of Arkansas School of Medicine, presented a program on open heart surgery as performed at the Medical Center at the Park Plaza Lions Club meeting September 28th.

### Orthopaedic Group Meets

The annual fall meeting of the Arkansas Orthopaedic Society was held November 11th at the University of Arkansas Medical Center. Dr. Harold G. Hutson of Little Rock is president of the group.



**THE NEW COOPER CLINIC BUILDING, FORT SMITH, ARKANSAS**

**Clinic Moves to New Location**

Cooper Clinic moved from its old location at 100 South 14th Street, Fort Smith, to new facilities at Waldron Road at Ellsworth on October 9th. The new, two-story building has a capacity for fifteen physicians. The downstairs portion houses administrative and business offices, internal medicine, dermatology, X-ray and lab facilities; with the staff surgeons occupying the upstairs portion. Clinic staff members are: Drs. A. C. Bradford and Roy Vanderpool, Dermatology; Drs. Kenneth Thompson and J. V. LeBlanc, Internal Medicine; Drs. S. W. Hawkins and W. C. Holmes, Jr., Surgery; Dr. Taylor Prewitt, Cardiology; Dr. Jerry R. Stewart, Pulmonary Diseases; and Drs. Davis W. Goldstein and W. F. Adams, emeritus.

Cooper Clinic was founded in the early 1920's by Dr. St. Cloud Cooper, Dr. M. E. Foster, Dr. S. J. Wolfermann, Dr. A. C. Belcher, Dr. W. R. Klingensmith, Dr. H. B. Thompson, Dr. D. W. Goldstein and Dr. A. A. Blair.

**Pediatricians Hold Meeting**

The Arkansas Chapter of the American Academy of Pediatricians held its annual meeting September 29th and 30th at the United Methodist Assembly at Mt. Sequoyah. Among the guest speakers was Dr. Dan Shannon, director of the pediatric intensive care unit at Massachusetts General Hospital at Boston and a faculty member at Harvard Medical School. Dr. Kelsy Cap-

linger of Little Rock is chairman of the Chapter and Dr. Daisilee Berry of Little Rock is program chairman.

**Dr. Hornberger Is Speaker**

Dr. E. Z. Hornberger, Jr., of Fort Smith, was the speaker at meeting of the Coronary Care Auxiliary which was held October 11th at Sparks Regional Medical Center. The auxiliary is made up of spouses of coronary patients.

**Regional Meeting of American College of Physicians Held**

The Oklahoma-Arkansas regional meeting of the American College of Physicians was held September 29th and 30th at the Shangri La Lodge on Monkey Island at Grove, Oklahoma. The meeting was presented in association with the Oklahoma Society of Internal Medicine and the Arkansas Society of Internal Medicine. Dr. Robert S. Abernathy of Little Rock, ACP governor for Arkansas, and Dr. R. M. Bird of Oklahoma City, ACP governor for Oklahoma, were in charge of arrangements.

**First and Second Councilor Districts Hold Meetings**

The meeting of the Second Councilor District was held at Kelly's Restaurant in Batesville on October 10th. Dr. Robert Watson, president of the Arkansas Medical Society commented on the Society's activities and affairs. Dr. John Allen and Dr. Sexton Lewis, both of Little Rock, gave

a scientific presentation on the subject of coronary heart disease surgery. Dr. Paul Gray of Batesville and Dr. John E. Bell of Searcy serve as councilors for the second district.

The meeting of the First Councilor District was held October 29th at the Arkansas State University Carl R. Reng Student Center in

Jonesboro. Dr. Douglas of Little Rock, Project Director for the Cardiac Rehabilitation Portion of the Arkansas Regional Medical Program, presented the scientific program for the meeting. Dr. Eldon Fairley of Osceola and Dr. John B. Kirkley of Jonesboro are councilors for the first district.



#### **Christmas Card Addressing Service Offered**

Do you dread the thought of buying, addressing, and stamping all those cards during the holiday season? How would you like the whole job of addressing cards to physicians done for you? Would you like to feel that your money is going to a worthwhile tax deductible cause in Arkansas?

If you answered yes to the above questions, you definitely will be interested in the Sharing Card being initiated this year to raise money for the American Medical Association Education and Research Fund (AMA-ERF) in Arkansas, by the Woman's Auxiliary to the Arkansas Medical Society. For a \$20.00 contribution to AMA-ERF, individuals, or couples, may have their names included on a card to be sent to each physician in the Arkansas Medical Society and

to the faculty physicians at the Medical School. The card itself is being designed by Mr. Jack Diner, who not only does the medical illustrations for the Medical School, but is a very respected artist who has kindly donated his talent for our AMA-ERF program. We are pleased and honored to have Mr. Diner helping us. The card will be non-denominational and will contain "Seasons Greetings". We hope it will take the place of individual cards to physicians and their families from physicians' families and businesses. (Businesses wishing to take part may contribute \$40.00 and be included.)

Won't you help us to help you? We would love to include your name (or business) and save you a lot of time and expense! (If you don't already know, check into what you spent on cards and postage last year!) Best of all, we would like to help you to help medical education in Arkansas.

Get in touch with your AMA-ERF Auxiliary Chairman, or fill in the form below and mail to the address shown. (Then sit back and be glad you did when the holidays get hectic and your cards are all done!) You will also have made a tax deductible contribution.

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**AMA-ERF Auxiliary Fund**

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(Must be received by November 15, 1972)

December, 1972

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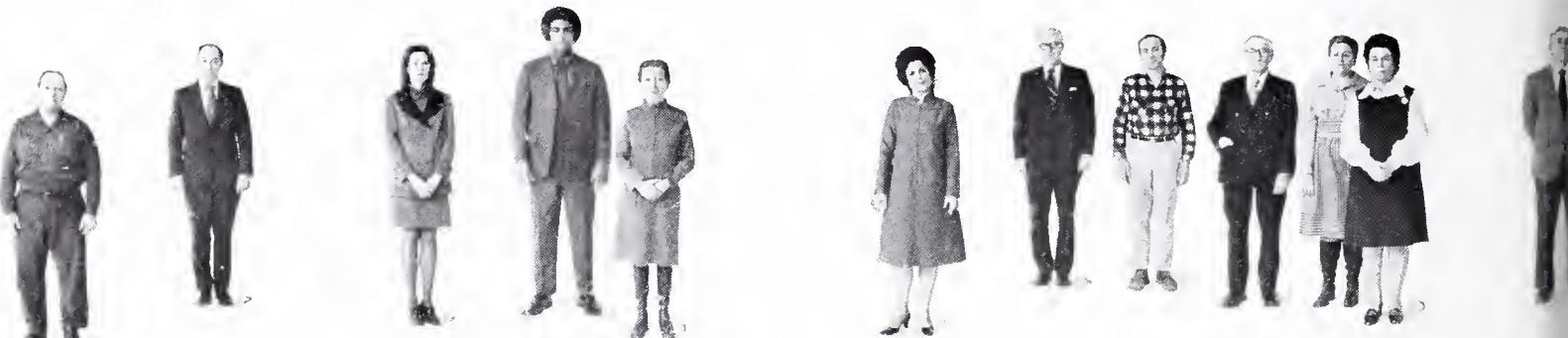
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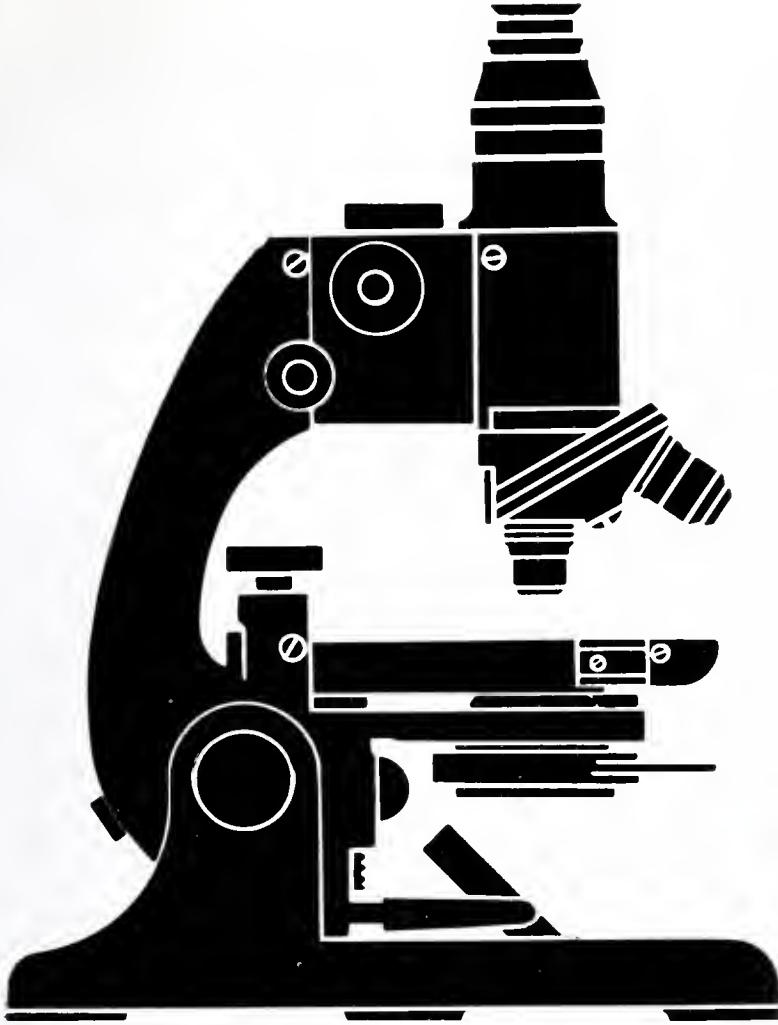
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**THE  
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# Significance of a "Lump In The Neck"\*

F. E. LeJeune, Jr., M.D., F.A.C.S.\*\*

A "lump in the neck" is either the presenting complaint or the unexpected finding in one group of patients. As the neck mass is not accompanied by pain or special discomfort, its size will vary greatly from one patient to the next. Since only their curiosity or medical orientation motivates them to seek medical evaluation, these patients will exhibit a marked contrast in the apprehension of some and apparent indifference of others.

At the time of the initial visit, the mass is usually solitary, either unilateral or asymmetrical, is either firm, doughy or cystic, and is not completely fixed but can be moved in at least one direction. It usually occurs in an adult who is in apparent good health, and it is of relatively recent onset, that is, two weeks to several months. There is usually no obvious sign of trauma or inflammation.

According to Conley<sup>1</sup> these patients may be classified into three groups with respect to their medical orientation:

Group I might be called the Minimal Delay Group, and it includes those individuals who submit to an annual or bi-annual physical examination in the hope that it will reveal them to be normal year after year, but with the secondary hope that should a malignant process develop, it will be detected at an early, curable stage. They are better adjusted to medical examination, test reports and advice, and are more willing to accept proffered advice with less anxiety and confusion.

Group II might be called the Maximal Delay Group, and includes those individuals who await the development of a specific sign or symptom before calling attention to an abnormality. They delay seeking medical advice in the hope that their problem is a temporary phenomenon which

will resolve spontaneously within a few weeks or months. Gross distortion of body contour, impairment of function, and the advent of pain finally motivates their visit to the physician.

Group III might be called the "Perpetual Concern" group and is much smaller than the first two. It includes individuals who seek repeated examination by first one physician and then another, even though repeated studies have indicated no suggestion of malignant disease. Professional psychiatric help is needed by this group in addition to their physician's reassurance.

## DIFFERENTIAL DIAGNOSIS: BENIGN CONDITIONS

Benign conditions are first considered as certain of them are quite common:

### Lymphadenopathy

The bilateral lymphadenopathy of children with infections in Waldeyer's ring of lymphoid tissue is seen so frequently that we hesitate to include it in the discussion. However, Jesse<sup>2</sup> of M. D. Anderson Hospital believes that all non-tender cervical lymph nodes larger than 2.0 cm which persist should be viewed with suspicion.

Adolescents and young adults with viral adenopathies such as infectious mononucleosis usually display generalized lymph gland enlargements as well as systemic illness. Mumps, cat scratch fever, and adenopharyngoconjunctivitis (APC) virus all behave somewhat similarly in this respect.

Tubercular adenitis is now rarely seen. The nodes are small, multiple, stony hard, and located low in the neck.

Inflammatory hyperplasia of a single node is probably the least likely cause of a persistent cervical enlargement in an adult, but it is one of the most common diagnoses given to the patient with a lump in the neck. Infection in the teeth or tonsils is most likely to produce such

\*Presented at the Annual Meeting of the Arkansas Medical Society, April 23-26, 1972, Hot Springs, Arkansas.

\*\*Head of Department of Otolaryngology, Ochsner Clinic and Ochsner Foundation Hospital, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

nodal enlargement. The enlargement, however, should subside within two or three weeks.

### Cysts

A sebaceous cyst may present as a solitary mass but it usually is easily recognized because of its fixation to the skin and its cystic texture.

A dermoid cyst, usually not fixed to the skin, is more likely to be near the midline. There may or may not be a tract communicating with the skin.

The branchial-cleft-cyst usually has a history of increasing and decreasing size and usually presents anterior to the border of the sternomastoid muscle. While acutely infected, the cyst may extend from the hyoid bone to the tip of the mastoid and lie in contact with the body of the mandible. Adhesions to these structures may persist after its size decreases, making its dissection and removal more tedious.

Thyroglossal-duct-cysts may present slightly to the right or left but usually are close to the midline and immediately inferior to the hyoid bone. When they present above the hyoid bone, they may give the patient a double chin profile and be mistaken for a large ranula in the floor of the mouth. Intimate attachment to the central segment of the hyoid bone usually can be demonstrated by having the patient protrude his tongue or swallow during the examination. If normal thyroid gland cannot be palpated in the lower neck, a thyroid scan using  $I^{131}$  isotope may establish its presence or absence. Thyroid nodules, of course, should present little confusion as they are intimately attached to the thyroid gland, moving with it during the act of swallowing. Toxic nodules would, of course, be accompanied by the well-established signs of thyrotoxicosis.

### Cystic Hygroma

Cystic hygroma usually appears in the early years of life but may appear as late as the fifth or sixth decade. Intermittent swelling and decreasing of size is usually reported. Soft, low pressure fluid in thin-walled sacs characterizes this mass. Transillumination with small penlight flashlight in a darkened room may reveal the multi-chambered architecture of these vascular tumors.

### Lipoma

Lipoma is one of the benign connective tissue tumors that could offer a brief challenge to the clinician. Its soft, free, mobility could be mistaken for a low pressured cyst. Its relatively

superficial location and tendency to be accompanied by others may serve as a clue.

### Enlarged Salivary Glands

Salivary gland enlargements are usually encountered near or adjacent to a portion of the mandible. The benign conditions of sarcoidosis and Mikulicz's disease are often bilateral, though one side may be larger. The major salivary glands, parotid or submaxillary, are usually involved before the lesser ones.

Warthin's tumor, or papillary cystadenolymphomatous, consistently occurs near the angle of the mandible, in the tail of the parotid gland of elderly men. Even though these tumors seem to behave in a benign fashion, effort should be made to avoid spillage of contents into surrounding tissues.

Mixed tumors of the salivary gland also are usually benign, but may recur locally if the capsule is penetrated during diagnosis or excision. Although most common in the parotid gland, they may occur in the submaxillary, sublingual, and minor salivary glands of the palate, fauces, buccal mucosa, nasopharynx, nose, and paranasal sinuses. Benign mixed tumors of the parotid do not produce paralysis of the facial nerve even when they are massive in size.

Some tumors of the salivary glands undergo malignant degeneration and will be discussed later.

### Vascular Tumors

Vascular tumors of the neck are usually characterized by intimate association with the carotid artery. Aneurysm is most likely secondary to a penetrating injury of the neck. Palpation and auscultation of the turbulent blood flow usually leaves little room for doubt. Carotid body tumors lack the pulsatile feature and may require the support of carotid angiography. As ably discussed by Wilson<sup>3</sup> in 1971, a strong tendency for familial incidence exists. Only rarely do these exhibit local, regional, or distant spread.

### Nerve Sheath Tumors

Nerve sheath tumors, or neurolemomas, of the vagus or other nerves tend to be firm to palpation fixed in a vertical plane but movable in a horizontal direction.

### Pharyngeal Diverticulum

The partially filled or inflamed pouch of a Zinker's or pharyngeal diverticulum will usually present to the left of the midline near the carotid

bifurcation. Digital pressure may reduce its size and flood the patient's hypopharynx with unexpected secretion of food matter eliciting a coughing paroxysm from the aspirated contents. A bubble or gurgling sound on swallowing may also help to confirm its presence.

### Bony Prominences

Finally, in the neck of a relatively thin individual a prominence may be palpated over the transverse process of the second cervical vertebra or axis. Due to either local trauma or osteoarthritis, these prominences may become tender, painful, and even enlarged. Their distinct firmness, proximity to the skeletal framework, and general immobility serve as clues to their diagnosis. By placement of the stem of a vibrating tuning fork against one prominence and then listening to the opposite side with the bell of a stethoscope, one may demonstrate the relatively clear sound transmission of bone.

### DIFFERENTIAL DIAGNOSIS: MALIGNANT STATES

#### Metastatic Lesions

Martin and Marfit<sup>4</sup> in 1944 stated that "about 80% of palpable neck masses are malignant, excluding benign thyroid enlargements. After the fifth decade, 90% are of metastatic origin. About 25% are from below the clavicle and are from intra-abdominal malignancies." In the 19th century the Prussian scientist and political leader Virchow, called attention to the importance of neck masses as a symptom of malignant disease and the anterior scalene nodal enlargement of metastatic gastric cancer bears his name.

Within the past year, Boles and Cerny<sup>5</sup> of the University of Michigan Hospital reported that of 105 cases of carcinoma of the kidney, eight had metastasis to the head and neck as a presenting complaint. Singleton et al<sup>6</sup> reported carcinoma of the prostate presenting initially as a neck mass. An enlarged node in the neck is the presenting symptom of 25% of patients with cancer of the oral cavity or pharynx, of 47% of patients with cancer of the nasopharynx and of 23% of patients with thyroid cancer.<sup>2</sup>

In an earlier publication<sup>7</sup> the techniques for the diagnosis of a neck swelling which is suspected to be metastatic were detailed. In general, a thorough history, physical and roentgenographic examinations, and complete laboratory studies are indicated. Specific examinations and

biopsies of the nasopharynx, oral mucosa, hypopharynx, and larynx are required.

Special indications as to the location of the primary lesion can be implied from the normal lymphatic drainage pathways. The position of the node may be directly in the drainage pattern of a specific anatomical field, and thus aid in the localization and diagnosis of the primary malignancy.

*Submental or submaxillary nodes* are the usual site of metastasis in primary cancer of the skin of the lip, corner of the mouth, or the lateral aspect of the nose or cheek. They may also indicate mucosal lesions of the anterior portion of the floor of the mouth, the lower gum, and the lateral gingivobuccal sulcus.

*Subdigastric nodes*—(also known as sentinel, tonsillar or jugulodigastric nodes) are the usual site of metastasis reflecting a primary cancer of the middle and posterior third of the tongue, middle and posterior third of the floor of the mouth, the faucial arch, the tonsil or tonsil fossa.

*Midjugular node* metastasis is most often associated with a primary cancer in the lateral or posterior pharyngeal walls, pyriform sinus, supraglottic larynx, or thyroid gland.

*Low jugular node* metastasis may indicate a primary cancer in the thyroid gland or from below the clavicle.

*Anterior scalene node* metastasis is almost certain to indicate a primary lesion from somewhere below the clavicle. The primary malignancy may be in the lung, breast, stomach, pancreas, cervix, or prostate, or kidney.

*Posterior cervical node* metastasis, whether the nodes are low or high, would probably be secondary to a primary cancer of the nasopharynx. Occasionally, low posterior cervical node metastasis may occur from a primary cancer of the thyroid gland.

The primary lesion may be discovered in all but 10% to 15% of patients<sup>2</sup> presenting with a lump in the neck by a careful examination, including biopsy of the suspected site of the primary malignancy.

#### Malignant Tumor of the Parotid Gland

Malignant degeneration of a long standing mixed tumor of the parotid may be signaled by the appearance of pain, tenderness, trismus and branch paralysis of the facial nerve. Squamous cell carcinoma is the most common malignant tumor of the parotid, but in young women ade-

noid cystic carcinoma, also known as cylindroma, is more common. This is a slow growing, but extremely persistent malignant tumor. Perineural and perilymphatic invasion with pulmonary metastasis, appearing even years after apparent control of the disease, is commonly seen. Avoidance of either needle or other biopsy of any parotid or salivary gland mass is essential.

The term "primary bronchiogenic carcinoma" has been carefully omitted from this discussion as we believe these should be considered as metastasis from an undetected primary cancer.

#### TREATMENT

A suspicious node in the neck should not be biopsied. It is assumed that the node is positive and treated accordingly. If a radical neck dissection is performed, the node and its surrounding tissues are removed en bloc without transsection of lymphatic channels which might carry tumor cells. Only after removal from the patient is the specimen closely examined and the node exposed and opened. The gloves, gown, and instruments are never returned to the operative field for fear of tumor-seeding.

If radiation therapy is performed instead of surgery, the uninterrupted blood supply to neck tissues is preferred as tissue oxygenation should be maximal for optimal response.

Although it is to be avoided if possible, node biopsy may become necessary in the 10% of cases in which no primary malignancy can be detected after exhaustive investigation. In this case, the incision should be located conveniently to followup excision if radical neck dissection becomes necessary one or two days later. As small an incision and as limited a dissection as can be managed, should be further guidelines. Needle

biopsy and aspiration may yield adequate material for diagnosis of squamous cell carcinoma but it is usually inadequate for establishing a diagnosis of lymphoma. Mixed tumors of the salivary gland should never be subjected to needle or incisional biopsy.

#### SUMMARY

The differential diagnosis of a patient with a "lump in the neck" includes many benign conditions but the most important consideration is that it represents metastatic spread from a subtle primary malignant growth. Clues to the location of the primary malignancy are available from the location of the metastasis. Careful and even exhaustive diagnostic procedures should reveal the primary malignancy in all but 10% to 15% of cases.

Biopsy of the neck mass is to be avoided if at all possible to prevent seeding of the tumor into other tissue. When biopsy is unavoidable, however, careful planning will lessen its role of interference with definitive treatment.

#### REFERENCES

1. Conley, J.: Concepts in Head and Neck Surgery. New York, Grune and Stratton, 1970.
2. Jesse, R. H.: Management of the suspicious cervical lymph node. Postgrad Med 48:99-102, 1970.
3. Wilson, H.: Carotid body tumors—diagnosis and surgical management. J Arkansas Med Soc 67:250-253, 1971.
4. Martin, H., Morfit, H. M.: Cervical lymph node metastasis as a first symptom of cancer. Surg Gynecol Obstet 78:133-159, 1944.
5. Boles, R., Cerny, J.: Head and neck metastases from renal carcinomas. Mich Med 70:616-618, 1971.
6. Singleton, M. A., Turley, J. C., Grant, J. A.: A lump in the neck: a case report of cervical metastasis from prostatic carcinoma as the initial symptom. J Tenn Med Assoc 64:217-220, 1971.
7. LeJenne, F. E., Jr.: Cysts and other tumors of the neck. Postgrad Med 31:499-503, 1963.



#### Sciatica Caused by Sacral Nerve Root Cysts

I. Jacobson (Royal Infirmary, Dundee, Scotland) and J. L. Plewes

*Lancet* 2:799-802 (Oct 17) 1970

Eight patients with sacral nerve root cysts are reported, four of whom required definitive surgery. The cysts are probably formed by an extrusion of the arachnoid around the sacral nerve roots, and are filled with cerebrospinal fluid. Symptoms and signs are clinically indistinguishable from those of a low lumbar disc protrusion.

The diagnosis should be suspected if a myelogram does not show the anticipated disc lesion; the patient should then be rescreened within a few days in the upright position and with jugular compression. Conservative treatment is indicated if symptoms are mild; surgical intervention may be required for patients with troublesome sciatica, sensory loss, or a motor deficit. Operative approach is by sacral laminectomy; the cysts are defined, opened, and obliterated with the nerve root constantly in view.

# Management of Urinary Tract Infections<sup>†</sup>

Jack E. Mobley, M.D.<sup>\*\*</sup>

**U**rinary tract infection may be compared to the bulldog — what it lacks in charisma, it makes up for in persistence. Few diseases are more frequently encountered by the clinician than infection of the urinary tract.

Despite, or perhaps because of, its frequency this disease is often mismanaged, however. The patient with recurrent cystitis and pyelonephritis who has never had a complete evaluation of the urinary system is an all too frequent visitor to the urologist's office. Yet, often the only procedure that the urologist may perform for these patients, which the practicing physician does not or cannot, is a cystoscopic examination.

Statistical studies have shown that in 60% of instances of pyelonephritis there is an associated abnormality of the urinary tract. Consequently, one should think of this possibility in the patient with urinary tract infection; and suitable studies should be performed to determine the presence or absence of such abnormalities, especially in the patient with recurrent infections.

The busy physician's approach to the patient with urinary tract infection must be practical as well as thorough. Fortunately, most of the time both goals can be accomplished.

The need for a good history and physical examination has been adequately emphasized and is of no less importance here, particularly in regard to a history of previous urinary symptoms or infections. Although microscopic examination of the urine will generally provide a diagnosis, it is necessary to use care in the collection of the specimen. In the instance of the male a mid-stream specimen is quite adequate. However, in the female a "clean catch urine" is hard to collect; and if there is any doubt, it is probably better to obtain a catheterized specimen. The addition of a drop of methylene blue to the urinary sediment may make the detection of bacteria easier when microscopic examination is performed.

There are those who do not perform cultures of the urine routinely. The reason usually given is that cultures are not practical and are expensive. Both of these may be valid reasons in

given circumstances. However, anyone who has had the experience of the "guessing game" which occurs when the wrong antibacterial is chosen recognizes the importance of urine cultures and bacterial sensitivities in certain patients. Many physicians buy inexpensive incubators, plate urine on disposable agar plates, and add antibacterial sensitivity discs. In 24 to 48 hours, the sensitivities of the organism can be obtained — even if its name is not known. This is a relatively inexpensive procedure when done in this manner. It can be recommended as an alternative to more sophisticated bacterial studies which are necessary only rarely.

The selection of a therapeutic agent becomes important once the diagnosis of urinary tract infection is established. Even when a culture has been obtained, the results will not be known for 24 to 48 hours; but the patient needs to be started on treatment immediately. At this point it is helpful to know what organisms occur with what frequency in the locale and what their sensitivities are. An analysis by the hospital laboratory of the bacterial cultures of each year can provide this information and is recommended as a function of the laboratory. The selection of an antibacterial agent then can be made on a more scientific basis than reliance on the drug detail man who gives the assurance that his agent is far superior to all others. In the less severe infections sulfonamides, nitrofurantoin, or tetracycline may be quite adequate; whereas the patient with high fever and chills probably should have agents which are bactericidal and have broader antibacterial spectra. Once treatment is started it should be continued for ten to fourteen days. Urinalysis and urine culture should be performed at three month intervals for the first year or two after treatment to be sure there has been no recurrence of the infection. Patients who have had more than one urinary tract infection should have intravenous pyelography, voiding cystourethrography, and residual urine determinations. Should abnormalities be found, cystoscopy or other special procedures may be necessary.

It sometimes becomes necessary to treat urinary or other infections in patients with impaired

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renal function, and modification of the dosage of some of the antibacterials is necessary if they are to be used safely in renal failure. Most of the antibacterial agents in use today are excreted in whole or part by the kidney. Some are relatively safe even in renal failure — these include penicillin G, the synthetic penicillins, and the cephalosporins. On the other hand the sulfonamides, tetracyclines, streptomycin, kanamycin, polymyxin B, colistin, and gentamycin are all potentially toxic if given at usual dosage to the patient with decreased renal function. It should be emphasized, however, that, used properly, these agents can be given safely to the patient in renal failure. Generally, the steps to be followed are these: First, determine accurately the patient's renal function, preferably by creatinine clearance; or, if this is not available, a reliable blood urea nitrogen will usually suffice. Second, select the antibacterial which is most effective against the infecting bacteria. Third, give a full therapeutic dose of the antibacterial agent. Finally, give a maintenance dose of the antibacterial agent at the appropriate interval. The catch, of course, is to know the maintenance dose and the appropriate interval. The maintenance dose is usually one-half of the initial dose or the usual therapeutic dose, whereas the interval varies with the agent. The accompanying chart shows the appropriate interval (in hours) for maintenance dosage of the commonly used agents which require modification. It is assumed that the patient is in complete renal failure, i. e., creatinine clearance below 10 cc. per minute, blood urea nitrogen above 60 mg%, or oliguria. For lesser degrees of renal failure the interval is modified accordingly. Failure to modify the

dosage of these agents in renal failure can result in severe toxicity. Treatment of infections of the urinary tract in these circumstances may be difficult, since some of the agents do not reach the urine in significant amounts in renal failure. The tetracyclines, nitrofurantoin, and the sulphonamides fall into this group, while the synthetic penicillins, the cephalosporins, polymyxin B, colistin, kanamycin and gentamycin reach the urine in therapeutic amounts despite rather extreme renal failure. Proper administration of one of the agents in the latter group is indicated in these circumstances.

With a modicum of effort and planning, the patient with urinary tract infection can be evaluated and treated with excellent results by any practicing physician. Rarely will referral to specialty care be required. Closer attention to the management of these patients should reduce the incidence of renal failure attributable to chronic or recurrent pyelonephritis.

#### DOSAGE INTERVAL IN OLIGURIC PATIENTS

Penicillin G	10-12 hours
Synthetic Penicillin	10-12 hours
Tetracycline	72-96 hours
Streptomycin	72-96 hours
Nitrofurantoin	do not use
Polymyxin B	72-96 hours
Colistin	72-96 hours
Kanamycin	72-96 hours
Gentamycin	48 hours
Cephalosporins	12-24 hours

#### REFERENCE

1. Kunin, C. M. A Guide to the Use of Antibiotics in Patients with Renal Disease. *Annals of Internal Medicine* 67:151, 1967.



#### Elevated Histaminase Activity in Medullary Carcinoma of the Thyroid Gland

S. B. Baylin et al (National Heart and Lung Institute, Bethesda, Md 20014)

*New Eng J Med* 283:1239-1244 (Dec 3) 1970

A survey was made of histaminase activity in serum and selected tissues of patients with various diseases, utilizing a new radioassay for histaminase. Elevated levels of histaminase activity were found in the sera of four patients with metastatic medullary carcinoma of the thyroid. Pa-

tients with localized forms of this tumor had normal serum values. Elevated histaminase levels were found in all medullary carcinoma tissues examined from seven patients; specimens consisted of both metastatic and primary tumor tissue. The elevated enzyme activity appeared to be specific for histaminase since activity of other amine oxidase was not increased in serum or tissue. Measurements of histaminase activity afford a possible new diagnostic approach to this type of thyroid carcinoma.

# End-Stage Renal Disease: Management in Arkansas 1972

## The Changing Scene

William J. Flanigan, M.D., George L. Ackerman, M.D., Galen L. Barbour, M.D., Thomas E. Brewer, M.D., Fred T. Caldwell, M.D., Ernest H. Harper, M.D., C. Lindsey Miller, M.D., Rodney M. Patterson, M.D., Hoyte R. Pyle, Jr., M.D.\*

### THE PROBLEM AND THE POTENTIAL

One of the most dramatic examples of medical progress during the past two decades has been the realization of the two age-old dreams of transposing functional tissue from one individual to another and to produce an artificial substitute for a human vital organ. Both dreams have become realities offering hope to the large number of patients suffering from end-stage renal failure. Only a few years ago the patient with terminal renal disease had a life expectancy measured in terms of days or, at the best, weeks. The tragedy of this fatal illness was compounded by the fact that 1) the majority of these patients were teenagers or young adults, whose most satisfying and productive years lay ahead, 2) in most instances there was no simultaneous systemic disease which would handicap productive life, and 3) the potential existed for full physical, social and economic rehabilitation, if a satisfactory substitute for their deteriorated renal function could be found. The Burton Report submitted to the Surgeon General in July of 1968 estimated that 50,000 people in the United States die of uremia each year. Of this number at least 10,000 would be suitable for treatment either by artificial kidney dialysis or transplantation. When the percentages derived from these figures are applied to the 1970 population of Arkansas an estimated 554 deaths from kidney disease occur annually. Most recently available Public Health statistics for Arkansas indicate that in 1967 there were actually 673 deaths attributable to renal disease, a figure substantiating the estimate derived from the Burton Report and perhaps indicating a somewhat higher incidence of kidney disease in the State than in the Nation.

as a whole. It can be conservatively assumed that there are some 600 deaths from end-stage kidney disease in Arkansas each year. Of this number 150 to 200 patients are suitable for having productive life sustained by chronic intermittent dialysis and/or kidney transplantation. During the 8 years preceding July 1971 a total of 46 patients supported by NIH research funds were able to obtain such treatment representing only 3% of those who were medically acceptable. What was the cause of the "delivery-gap" between need and services rendered (a "gap" of 1200 to 1600 dying patients who failed to receive treatment)? Fundamentally, the gap existed for four reasons: 1) the basic research status of these procedures during the early and mid 1960's, 2) inadequate funding, 3) lack of sufficient trained personnel, and 4) lack of a state-wide coordinated attack on the problem. During the last 3 years dialysis and transplantation have graduated from a research status to definitive therapy. Through the visionary efforts of many physicians and hospital administrators the "delivery-gap" shortcomings are currently under a cooperative attack.

### THE PLAN

Recognizing the delivery-gap, nephrologists and hospital administrators throughout the greater Little Rock area combined forces during the last half of 1970 and presented to the Arkansas Regional Medical Programs a coordinated plan addressing their efforts to these problems. Every effort was made to avoid duplication of facilities while simultaneously providing flexibility for changes or new developments dictated by continuing advances. With the enthusiastic support of the Arkansas Medical Society the grant proposal was submitted and approved. Funding began in June of 1971. It was the first comprehensive kidney program in the country approved from categorical Regional Medical Program kidney funds. The grant included provisions to provide additional personnel and

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equipment for expansion of the Home-Dialysis Training Unit at the Arkansas Baptist Hospital, to refurbish and staff the Kidney Transplant Facility at the University Hospital, and to support the ancillary transplantation services such as Organ Procurement and Tissue Typing Laboratory. In addition it provided for the establishment of ten satellite dialysis units throughout the State. The location of Dialysis and Transplantation Facilities are shown in Figure 1. The building blocks necessary for construction of such a program are shown in Figure 2. Paradoxically, even with the generous support of the Regional Medical Programs, very little progress could have been made in the treatment of patients with terminal renal disease because these funds specifically excluded direct patient care. Artificial kidney treatments and transplantation are expensive, and the majority of patients in Arkansas are not covered by major medical insurance. Accordingly, there would have been little hope for these expanded facilities to contribute significantly to treatment of Arkansas

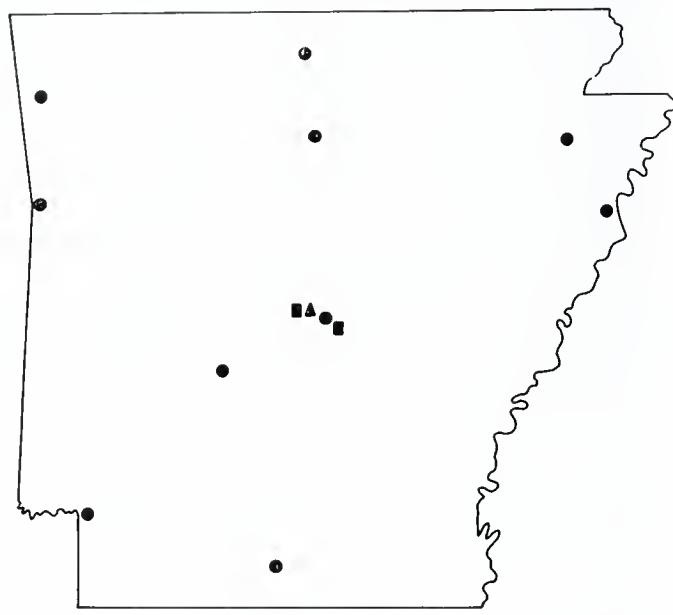


Figure 1  
Distribution of Kidney Treatment Centers in Arkansas.

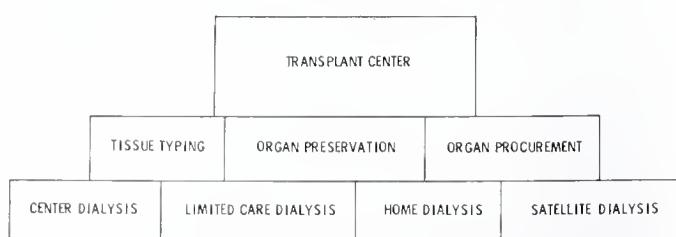


Figure 2  
Component Parts Necessary for Treatment of Terminal Renal Disease.

patients suffering from terminal kidney disease. Recognizing the fact that complete rehabilitation was possible in this fatal disease, the 1970-71 session of the Arkansas Legislature created the Arkansas Kidney Disease Commission and appropriated categorical funds for the care of patients who were candidates for treatment. Both sources of funding were critical for development of an effective program. Without Arkansas RMP support the necessary personnel and facilities would have been non-existent; without the State appropriation for direct patient care only a limited number of patients could have made use of the facilities. Previous farsighted legislation by the 1968-69 Legislative Assembly had paved the road to treatment by transplantation by passage of the Uniform Anatomic Gift Act enabling an individual to pledge his eyes, kidneys or any needed part after death by signing a donor card. (Forty-eight states have now adopted identical provisions for donation of life-saving tissue. Arkansas was the first to formalize legislation and served as a model for legislative action in other states). Patient flow through this life-saving program is indicated in Figure 3. Note that patients entering the recipient pool from center or home-dialysis exit to the care of their primary physician after receiving a successful transplant. Those whose graft is unsuccessful are returned to the dialysis program to await a second, third or fourth chance at transplantation (a 19-year-old girl from northeast Arkansas has recently received her fourth kidney and it appears that this kidney will be functional and compatible with life for a long, long time). The critical point is that mortality from transplantation should be negligible. In the event of graft failure the patient returns to artificial kidney treatments until a second, third, or even fourth graft can be obtained. The emphasis is on patient survival — not graft survival.

## THE SOLUTION

### A) Transplantation

During the past few years transplantation has become increasingly successful and has now

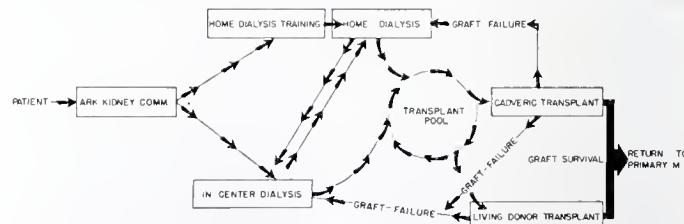


Figure 3  
Patient Flow Through Dialysis-Transplant Program.

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reached the point that at least 75% of suitable candidates can look forward to full restoration of health. More than 40 patients in Arkansas have received successful transplantation. Between January 1964 and April 1972 a total of 65 transplants had been performed at the University of Arkansas Medical Center. Nineteen of these were done during the past 8 months indicating tremendous acceleration of this activity. The geographic distribution of these patients is shown in Figure 4. Note that the success of the Program has attracted patients from other states and even from other countries. There are several advantages of transplantation over artificial kidney treatments. The *quality* of life provided by a successful transplant far exceeds that which can be expected on dialysis. Secondly, the psychological, social, and economic demands imposed by the 18 hour a week dependency on the artificial kidney are overcome. And finally, economic considerations play a major role. First year treatment on the artificial kidney for home-dialysis (the cheapest type of therapy available) averages \$10,000 to \$12,000 whereas In-Center dialysis (the most expensive) averages from \$20,000 to \$25,000. These Center costs continue year after year, but on home-dialysis the cost drops to \$4,000 to \$5,000 for ensuing years. It must be recognized that these figures represent

recurring yearly costs which are cumulative as the number of patients increase. Two hundred new patients entering the Program in the first year would require a minimum of 2 million dollars for their first year of treatment unless some open-ended "out" were provided. Transplantation provides this "out". Kidney transplantation requires 2 to 4 weeks of initial hospitalization and variable periods of subsequent hospitalization for intercurrent illnesses, rejection episodes, and a variety of complications the immunosuppressed patient is heir to. The estimated total costs for transplantation during the first year is approximately \$8,000. Careful cost accounting carried out several years ago by the members of the staff at the University of Arkansas Medical Center demonstrated medical expenses incurred by the transplanted patient *after* the first year averages \$500, a figure which can be borne by an individual even with modest income.

The results of transplantation have progressively improved so that at the present time we can expect an 80% to 90% survival rate with familial donors and at least 75% survival rate with a cadaveric graft. Obviously many variables enter into the survival equation and space will not allow detailed exploration of all the variables involved. Although the technical aspects of transplantation are relatively simple, the procedure is one which must be done with meticulous surgical precision and attention to detail. Recognition and prompt treatment of reversible rejection episodes and intercurrent illnesses in the post-operative period mean the difference in success and failure. The transplantation unit must be solidly based on adequate dialysis facilities, tissue typing and on organ procurement as indicated in Figure 2.

#### B) Tissue Typing

Tissue typing using lymphocytes from the prospective donor and recipient has proven to be one of the major advances of the 1970's. It is recognized that the human histocompatibility leukocyte antigens (HL-A) are common to all tissues with the exception of red blood cells. By sampling the peripheral blood and separating lymphocytes it is possible to ascertain the presence or absence of these transplantation antigens in both the donor and recipient. It is generally accepted that with better antigenic matches there is a higher probability of success and lessening

#### TRANSPLANT PATIENTS

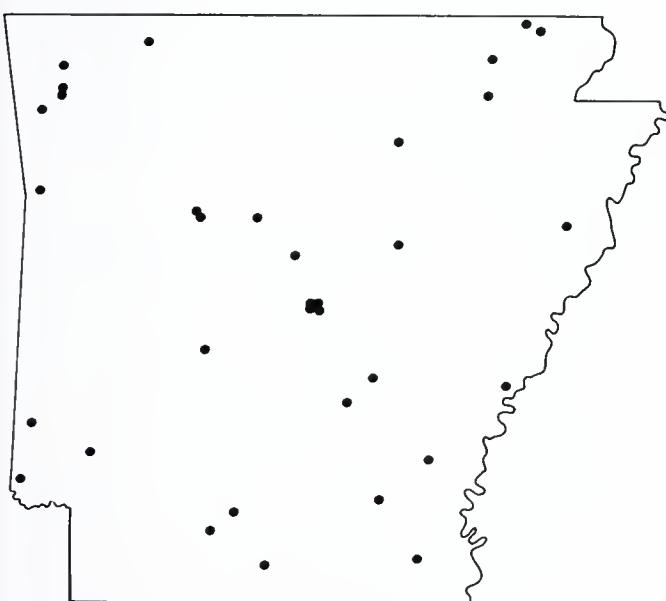


Figure 4  
Distribution of Patients Previously Transplanted at the University of Arkansas Medical Center.

of the need for massive doses of immunosuppressive therapy. Undoubtedly as the technique becomes more refined there will be better correlations with survival and HL-A typing. One of the most important aspects of tissue typing is the so-called "crossmatch" in which recipient sera is mixed with donor lymphocytes. Agglutination of the donor lymphocytes indicates that the recipient has pre-formed antibodies to one or more of the recipient's HL-A antigens. The presence of a positive crossmatch virtually precludes success of the transplanted organ. Such antibodies frequently develop as the result of blood transfusions or, in occasional instances, as a result of a prior kidney transplant which has failed. It is imperative that blood transfusion be held to a minimum. In the event transfusions are required the risk can be minimized by administering only saline washed erythrocytes.

#### C) Organ Perfusion

The single most limiting factor in developing a large scale transplantation program has been the procurement of donor organs. It is now possible by utilizing an *ex-vivo* pulsatile perfusion apparatus to sustain kidneys in a viable condition for 48 to 72 hours prior to transplantation. Such a period of storage is important for several reasons. Necessary tissue typing and cross-matching can be accomplished. The recipient can enter the hospital to undergo a final dialysis in preparation for transplantation. And finally, the most significant advantage of the capability of perfusing the cadaver organ is that it enables us to ascertain the viability of the harvested kidney. Since patients who are considered as potential donors frequently have decreases in blood pressure, hypoxia, and resulting impairment in renal function it is crucial to assess the viability of the organ prior to transplantation. In cadaver transplantation the most significant advance in the past year has been the acquisition of such a pulsatile perfusion apparatus. It is unquestionable that the transplantation of what would have been non-viable and non-functional kidneys has been avoided, thereby preventing a prolonged period of acute renal shutdown in the post-transplant period or the eventual loss of a necrotic kidney.

As indicated previously the single limiting factor in transplantation throughout the country today is the procurement of suitable organs. The shortage is not the result of an inadequate num-

ber of potential donors but a lack of public and physician education concerning the urgent need for tissue after death of a family member. We have found that physicians throughout Arkansas frequently lack information as to what patients can and should be considered to be potential donors. The appendix attached to this paper indicates the requirements necessary for procuring suitable and transplantable kidneys. Brochures containing this information have been and will be distributed to intensive care units in the major hospitals of Arkansas. Only by soliciting the enthusiastic assistance of all physicians in the state can this crucial demand for transplantable organs be met. In addition to the life-saving procedure of transplantation of a kidney we have frequently observed that the majority of the families of donors take some solace in the fact that a life has been saved from a tragedy which would otherwise produce only a poignant void. With the cooperation of all physicians in Arkansas it is our firm conviction that the supply of transplantable organs will be sufficient to meet the needs of patients dying of renal failure. A trained team of physicians and technicians are available 24 hours a day to assist primary physicians in harvesting kidneys any place within the State.

The Lions Club International of Arkansas has provided enormous help in undertaking full sponsorship of the Arkansas Eye and Kidney Bank. A "Donor Card Signing Day" is projected for the near future. All Arkansas physicians are encouraged to support this effort and to be prepared to answer their patients' questions concerning the donation of tissues and organs.

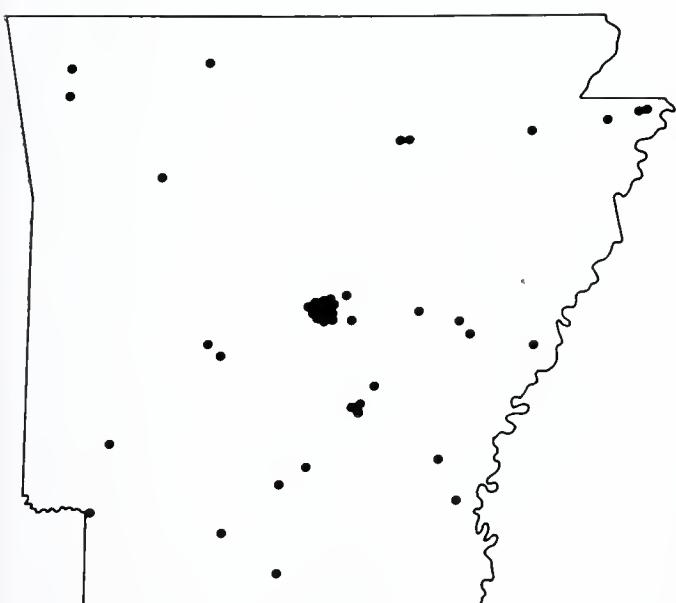
#### D) Dialysis

As previously indicated, the life expectancy of these patients can be measured in terms of days or weeks. Only 20% will have suitable relatives who will be willing to serve as donors. Consequently the majority of end-stage kidney patients must await procurement of a suitable tissue-typed cadaver kidney. In virtually all instances a relatively prolonged period on hemo or peritoneal dialysis will be required. Obviously the capability of utilizing virtually every cadaver kidney harvested will depend on the size of the available recipient pool. At the beginning of 1971 there were approximately 3600 patients on chronic dialysis in the United States. At that time there were only 7 patients on dialysis in Arkansas. As

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a result of the coordinated attack previously described, as of April 1972 there were 45 patients in the state undergoing dialysis treatments and awaiting transplantation (Figure 5). Although this number represents only a small percentage of those requiring and deserving treatment, it does indicate that there have been significant advances in closing the delivery-gap. Furthermore, the figure indicates that the geographic distribution of these patients throughout the State is relatively uniform. It is generally conceded that hemodialysis is preferable to peritoneal dialysis for several reasons. Hemodialysis is less time consuming than peritoneal dialysis, an average of 15 to 18 hours weekly being required to maintain suitable health. In contrast, average weekly requirements of peritoneal dialysis are 36 to 48 hours, an imposition virtually precluding the return to an individual's previous employment or activity. Secondly, in many instances hemodialysis can be successfully carried out in a home-setting thus providing considerable savings in costs over hospital-based peritoneal dialysis. Finally, with the exception of a few Centers the risk of peritonitis with its attendant morbidity and mortality has precluded long-term use for peritoneal dialysis. (The University of Arkansas Medical Center has maintained uremic patients on peritoneal dialysis for as long as three and a half years with an incidence of infection of only 0.3%.)

#### DIALYSIS PATIENTS



SPRINGFIELD, MO. - I

Figure 5  
Distribution of Patients on Dialysis Awaiting Transplant.

Unfortunately, artificial kidney treatments do not provide the final answer. The *quality of life* is less than optimum even though the majority of patients can be maintained in relatively good health. The cost of such ongoing treatment is prohibitive and has been mentioned previously. It is obvious that with ongoing success the expense of maintaining the 100 to 200 new patients produces an astronomical cost. Finally, the psychological dependency and time required to undergo artificial kidney treatments renders it at best a temporary procedure until further definitive therapy can be accomplished. There is no question that when applicable home-dialysis represents the dialysis treatment of choice. The time required for such training averages 2 to 3 months during which the patient and a responsible family member undergo intensive training in operation of the artificial kidney under the supervision of skilled personnel within the hospital. Subsequently, the patient is able to return home and undergo thrice weekly dialysis treatments of 5 to 7 hours duration each. The average cost for the first year of such treatment is approximately \$12,000 to \$15,000, subsequently decreasing to \$4,000 to \$5,000 annually. It is because of the economic savings and the relative independence of the home patient that this form of dialysis appears to be the method of choice. Unfortunately, home-dialysis is suitable only for a minority of patients. Socioeconomic factors, substandard housing, limited comprehension of the mechanics of dialysis, and the disruption of family life by the presence of an artificial kidney in the home precludes successful home-dialysis for many candidates. An accurate estimate of the percentage of patients dying of end-stage renal disease who are suitable for home-dialysis is not available for this state. However, based on the past five years of experience it is estimated that only about 25% of such patients would be suitable candidates for home-training. (Estimates throughout the country range from 10% to 80%; the usual figure quoted for the Southwestern United States is 20%.) For the other 75% the alternatives prior to transplantation include chronic In-Center dialysis with the economic and closed ended limitations previously discussed. Satellite dialysis in community hospitals is possible and operational within Arkansas but has the problem of excessive costs which generally exceed those of Center dialysis because of the

high personnel to patient ratio. The distribution of satellite dialysis centers has been indicated in Figure 1. These have been developed during the past 8 months and provide relatively comprehensive coverage of the State. An important function of the satellite units is providing back-up dialysis for the home patient in the event of equipment failure or intercurrent illness. An additional alternative type of treatment (not yet available in Arkansas) are "limited-care" dialysis units in which large numbers of patients can undergo treatment by relatively few personnel. The cost of such units exceeds that of home-dialysis but is considerably less than that of hospital-based center dialysis. These have the disadvantage of being limited to those patients living within commuting distance of the unit. Each type of treatment appears to have a role in the maintenance of patients prior to transplantation. It can be seen that gigantic strides have been made during the past year in providing treatment for citizens of Arkansas suffering from end-stage renal disease. This progress has been made possible through the cooperation of physicians, hospital administrators, and various health agencies throughout the State.

### SUMMARY

During a relative brief period the State of Arkansas has made enormous strides in providing services for its citizens suffering from end-stage kidney disease. The rapidly developing facilities and available personnel have resulted in a comprehensive program which is serving as a model program for many states attempting to implement similar services. At the present time it is estimated that our capabilities will provide the needed facilities for treatment of approximately 50% of suitable candidates. Further expansion of the facilities and personnel during the next year should afford the capability of being able to offer definitive treatment to all patients within the State suffering from end-stage kidney disease.

### Acknowledgment

The authors wish to express their appreciation to a great many people who have made this program possible. Particular thanks must be given to the State Legislature, Arkansas Regional Medical Program, University of Arkansas Medical Center, St. Vincent's Infirmary, and the Little Rock Veterans Administration Hospital. The Arkansas Medical Society has provided the sup-

port and encouragement necessary for implementing this comprehensive health plan.

### APPENDIX SO THAT OTHERS MAY LIVE Protocols for Collection of Kidneys for Transplantation

Advances in medicine and surgery have now made it possible to restore help to patients with terminal kidney disease who would have previously been considered hopeless. The most crucial limitation in kidney transplantation has been the availability of suitable organs. Your assistance in this life saving procedure is desperately needed. The families of prospective donors must be helped to realize that out of a tragedy at least something might be salvaged — the saving of another person's life.

- 1) Prospective donors should be under 65 years of age and have no history of kidney disease, hypertension, or diabetes.
- 2) Urinary output should be maintained at a level over 50 ml/hr by Osmotrol (or Mannitol) given I.V.
- 3) It is necessary that the kidneys be removed within 30 minutes of the cessation of heart beat. This crucial time requirement dictates that the majority of such donors will be patients being maintained on a respirator.
- 4) When the attending physician judges that further artificial maintaining of life is pointless and should be discontinued to prevent needless prolongation of suffering the family should be consulted concerning donation of the kidneys. In some instances the attending physician may desire a second opinion as to whether or not artificial maintenance of life should be stopped; such an attitude is commendable and should be encouraged.
- 5) If consent for kidney removal is granted the transplant team should be notified (any time of the day or night). The attending physician will indicate the time that he would like to discontinue artificial maintenance and the team will be at the hospital at that time. CONSENT SHOULD BE OBTAINED AND WITNESSED ON A STANDARD OPERATIVE CONSENT FORM. THE OPERATION TO BE PERFORMED IS "POST-MORTEM RE-

WILLIAM J. FLANIGAN, M.D., GEORGE L. ACKERMAN, M.D., GALEN L. BARBOUR, M.D.,  
THOMAS E. BREWER, M.D., FRED T. CALDWELL, M.D., ERNEST H. HARPER, M.D.,  
C. LINDSEY MILLER, M.D., RODNEY M. PATTERSON, M.D. AND HOYTE R. PYLE, JR., M.D.

#### MOVAL OF KIDNEYS FOR TRANSPLANT<sup>1</sup>.

- 6) When the transplant team arrives at the hospital a physician from the team will administer Dibenzyline (a drug which protects the kidneys), heparin (to prevent clotting), and may order additional I.V. fluids. He will notify the operating room and make the necessary arrangements for transfer of the patient to the OR.
- 7) When all arrangements have been made the patient will be transferred to the OR and ventilation will be continued with a hand operated bag.
- 8) Upon arrival of the patient in the OR ventilation will be continued until the abdomen has been preped and draped. Artificial ventilation will then be discontinued on request by the transplant physician (acting in this instance as relaying the wishes of the attending physician).
- 9) After cessation of respiration the heart will continue to beat for 4 to 10 minutes. The operation for kidney removal will not be

started until a heartbeat or pulse are no longer discernible.

- 10) The time of death will be recorded as that point where heartbeat has stopped (even though the patient may have been legally dead\* for several hours or days).
- 11) An operative note will be dictated by a member of the transplant team after removal of the kidneys has been finished.
- 12) Operating room charges and other expenses incurred during kidney donation (such as an EEG) should *not* be billed to the donor. These charges should be sent to Dr. William J. Flanigan at the University of Arkansas Medical Center.
- 13) Appropriate letters of gratitude will be sent by the transplant team to the family of the donor.

\*The concept that death has occurred when the brain is dead is accepted by all physicians. There is some uncertainty as to precisely what criteria should be used in defining brain death; these may vary from physician to physician and from hospital to hospital. Some of the widely accepted definitions include the absence of spontaneous respirations, absence of deep tendon and painful stimuli reflexes, presence of fixed dilated pupils, etc. The electroencephalogram (EEG) is frequently a valuable tool for determining "brain death". The living brain is characterized by the presence of electrical activity which is demonstrated on the EEG by spikes. Brain death can be said to be present when the EEG is iso-electric or flat.



#### Four-Year to Eight-Year Results of Vagotomy and Simple Drainage for Benign Lesser Curve Gastric Ulcer

H. Burge et al (West London Hosp, London)

*Brit Med J* 3:376-377 (Aug 15) 1970

Seventy-two benign lesser curve gastric ulcers treated by the authors by vagotomy and simple drainage between 1962 and 1965 are reported. This operation was used in the belief that benign lesser curve gastric ulcer is always secondary to duodenal or pyloric channel disease leading to retention, either persistent or transient. The only two failures in this series were both left with persistent gastric ulceration, even four years after the operation. Both had gastric retention in spite of the pyloroplasty and the gastric ulcer in each case was healed at once when a simple gastroenterostomy was added. Possibly all benign lesser curve gastric ulcers are curable if vagotomy is done in association with a satisfactory simple drainage procedure and gastric resection is no longer the operation of choice in benign lesser curve ulcer.

#### Follow-up of Patients With Chronic Pulmonary Histoplasmosis Treated With Amphotericin

G. L. Baum, J. C. Larkin, Jr., and W. D. Sutliff

(VA Hosp, Memphis 38101)

*Chest* 58:562-565 (Dec.) 1970

The late results of chronic pulmonary histoplasmosis treated with amphotericin B are of interest because of the chronic relapsing character of the disease. A total of 89 cases from four hospitals were reviewed according to a uniform plan. Of 56 cases that were observed repeatedly for an average of four years and four months, 48 (86%) were either well or died of causes other than histoplasmosis; 18 were well and working, 19 had inactive histoplasmosis and were not working, six patients relapsed but responded to a second course of treatment, and five patients died and had no active histoplasmosis at autopsy. The remaining eight patients (14%) had unsatisfactory results. These data cover longer time periods than those derived from controlled observations of early results reported elsewhere in the literature.

# An American Medical Association Analysis of H.R. 1— The Social Security Amendments of 1972

(Title II — Provisions relating to Medicare, Medicaid, and Maternal and Child Health  
as passed by Congress on October 17, 1972)

## CONGRESS ADOPTS H.R. 1, SOCIAL SECURITY AMENDMENTS OF 1972 (Public Law 92-603)

On October 17, 1972, the House (305-1) and Senate (61-0) agreed to a compromise conference report on H.R. 1, the Social Security Amendments of 1972. The conferees, in their consideration of 583 Senate proposed amendments, deleted the Administration's Family Assistance Plan and also rejected a Senate-passed compromise welfare proposal which would have authorized experiments with alternative welfare systems. The bill makes extensive changes in the Social Security program, as well as in Medicare, Medicaid, and Maternal and Child Health programs. Tax increases to finance these benefits were included, which now supersede tax increases enacted in June when Congress voted a 20% raise in retirement benefits which has now taken effect. Next year's social security tax rate will rise to a total of 5.85% of an individual's first \$10,800 income. The wage base would be increased again in 1974 to \$12,000. Likewise, the rate would rise to 6% in 1978.

Some 100 changes relating to Medicare, Medicaid, and Maternal and Child Health were adopted in Title II of the bill. In capsule form, significant provisions include the following:

... *Disability Beneficiaries* ... Extension of Medicare to provide benefits for disabled persons receiving monthly cash benefits for at least 24 months under the Social Security or Railroad Retirement programs. Among those covered are: disabled workers; disabled widows and widowers between age 50 and 65; disabled persons 18 and older receiving social security benefits for disabilities occurring before age 22, and others (Sec. 201)

... *Uninsured Individuals* ... Extension of Part A coverage under Medicare to individuals 65 and older, not otherwise eligible for Medicare, at a varying premium cost initially set at \$33 per month beginning in July 1973. Individuals electing to buy into Part A would be required to have Part B supplementary coverage. (Sec. 202)

... *Part B Premium* ... Fixing of Part B Medicare premium at \$5.80 per month through fiscal 1973, with any subsequent increases being related to the actuarial rate (one-half the estimated total benefit and administrative costs) or increases in monthly cash benefits. (Sec. 203)

... *Part B Deductible* ... Increase in the Part B Medicare deductible from \$50 to \$60. (Sec. 204)

... *Automatic Enrollment* ... Automatic enrollment in Part B, upon eligibility for Part A, for persons reaching 65 years of age after June 1973, unless an election is made not to participate in the supplementary program. (Sec. 206)

... *Incentives under Medicaid* ... Reduction in federal Medicaid matching for services in some facilities for lack of proper utilization and medical review methods: (a) by one-third after 60 days in a skilled nursing home or in an intermediate care facility, and (b) by one-third after 90 days (plus 30 days extension) in a mental hospital. ... No federal matching after a lifetime limit of 365 days in a mental hospital. ... Secretary given authority to compute reasonable cost differential for reimbursement between skilled nursing homes and ICF's. (Sec. 207)

... *Cost-Sharing under Medicaid* ... In States covering the medically indigent (those just above the income level for cash assistance), the medically indigent would be required to pay Medicaid premium, at graduated charges related to income. In addition, at State's option, the medically indigent could be required to pay deductibles and copayment amounts. Such deductibles and copayment need not be related to income level but must be nominal. (Sec. 208)

... *Medicaid Eligibility for Certain Employed Families* ... A welfare family losing eligibility for cash assistance because of increases in earnings remains eligible for Medicaid for a period of four months after cash assistance is stopped. States are not required to cover aged, blind, or disabled who are made newly eligible for assistance under the new federal increase in payment levels to such persons. (Sec. 209)

*... Medicare Payment for FEHB Beneficiaries*  
... Beginning January 1, 1975, the Medicare program would not pay for any otherwise covered service if such service is covered under the Federal Employee Health Benefits plan in which the beneficiary to whom the service was provided is enrolled, unless certain conditions exist under which FEHB coverage is supplementary to Medicare benefits and certain contributions are made for the health insurance of such enrollees. (Sec. 210)

*... Services Furnished Outside the U.S.*... Benefits are extended to cover services furnished a U.S. resident at a hospital outside the country if the foreign hospital is closer or more accessible from his residence; physician and ambulance services furnished in connection with such hospitalization; and emergency hospital services furnished in Canada to United States residents traveling between Alaska and the U.S. (Sec. 211)

*... Optometrists' Services under Medicaid*... Where States which have previously covered optometric services under Medicaid have retained specific coverage for eye care under physicians' services, then services of an optometrist also licensed to perform such services will be covered. (Sec. 212)

*... Federal Participation for Capital Expenditures*... Authorization to withhold or reduce reimbursement amounts to providers of services and health maintenance organizations under Title XVIII for depreciation, interest, and, in the case of proprietary providers, a return on equity capital, related to certain expenditures that are determined to be inconsistent with state or local comprehensive health plans. (Sec. 221)

*... Demonstrations re Prospective Reimbursement, etc.*... Requirement that the Secretary of HEW develop experiments and demonstration projects testing methods of making prospective payments under Medicare, Medicaid, and Maternal and Child Health Program, and to report on such projects to Congress by July 1, 1974. . . . In addition, authorization to experiment with: (1) reimbursement to ambulatory surgical centers; (2) elimination of the 3-day hospitalization requirement for extended care benefits; (3) use of institutional and homemaker services as alternatives to post-hospital services; (4) provision of day care services; and (5) method of paying for the services of physicians' assistants under Medicare . . . also to study whether services of

clinical psychologists may be made more generally available under Medicare and Medicaid. (Sec. 222)

*... Limitations on Costs under Medicare*... Authorization to set prospective costs recognized as reasonable for certain classes of providers in various service areas, excluding costs of items or services in excess of, or more expensive than, those that are determined by the Secretary to be necessary in the efficient delivery of needed health services. Such excess costs could be charged directly to the beneficiary under certain conditions. (Sec. 223)

*... Limits on Prevailing Charge Levels*... Limitation on reasonable charges, so as not to exceed the higher of the prevailing charge on December 31, 1970, or the prevailing charge level that, as determined by the Secretary, would cover 75% of the customary charges made for similar services in the same locality in the base year preceding. In the case of physician services, limitations are placed on future increases, based on economic changes. Payments under the Medicaid and Child Health Programs could not exceed the limits established under the Medicare program for similar services. Where medical services, supplies, and equipment do not vary significantly between suppliers, the charges could not exceed lowest charge levels in the area. . . . HIBAC to study methods of reimbursement for physicians under Medicare to evaluate effects on physicians' fees generally, the extent of assignments accepted by physicians, and the share of total physician-fee costs which the beneficiary must assume. The Council is to make alternative recommendations to present methods and state a preferred method. (Sec. 224)

*... Skilled Nursing Home and Intermediate Care Facility Payments*... Limitation on the average per diem cost for skilled nursing homes and intermediate care facilities countable for federal financial participation under Medicaid in any quarter to 105% of such costs for the fourth quarter of the preceding year, with allowable increases for added patient services. (Sec. 225)

*... Payments to Health Maintenance Organizations*... Authorization for reimbursement, through a single capitation payment, to qualified HMO's making available directly or under other arrangements, such Part A and B services as would otherwise be available in the area. A qualifi-

fied organization will have at least 25,000 members, of which not more than half are 65 or older, and will have been in operation at least two years (or, in a small or sparsely settled community, will have at least 5,000 members and be in operation at least three years). As incentives, the organization will be entitled to half of the savings represented by the difference between its costs and average per capita costs in the area for beneficiaries not enrolled in the organization, limited, however, to 10% of such average per capita costs. (Federal government would not share in losses.) The Secretary is directed to report annually to Congress on its experience with this provision. (Sec. 226)

*... Teaching Physicians . . .* Reimbursement for services of teaching physicians to a nonprivate Medicare patient to be made under Part A on an actual cost or "equivalent cost" basis. Exceptions under which fee-for-service may continue, would include payments for Medicare beneficiaries who are bona fide "private patients," and beneficiaries in institutions which meet certain charging practices since 1965. (Sec. 227)

*... Advance Approval of Extended Care and Home Health Coverage . . .* Authorization to the Secretary of HEW to establish, by medical conditions and length of stay or number of benefits, periods for which a patient would be presumed to be eligible for extended care or home health care benefits and services. (Sec. 228)

*... Termination of Payments . . .* Authorization in the Secretary to terminate Medicare, Medicaid, and Maternal and Child Health payments to providers of health or medical services found guilty of fraudulent representation, excessive charges or furnishing services in excess of need or of grossly inferior quality. The Secretary would create program review teams, in each state, composed of physicians, other professional personnel, and consumer representatives. (Sec. 229)

*... Comprehensive Medicaid Programs . . .* Elimination of the requirement that each state broaden its scope of care and services under Medicaid and liberalize the eligibility requirements. (Sec. 230)

*... Repeal of Section 1902(d) of Medicaid . . .* Repeal of Section 1902(d) of Medicaid, prohibiting States from reducing its expenditures for Medicaid from one year to the next. (Sec. 231)

*... Reasonable Cost of Inpatient Hospital Services . . .* Authorization under Medicaid and Title

V to the States to determine reasonable cost of inpatient hospital services in accordance with methods and standards developed by the State, but not to exceed reasonable costs under Medicare. (Sec. 232)

*... Payments Where Reasonable Cost Exceeds Customary Charges . . .* Reimbursement for services by providers under Medicare, Medicaid, and Maternal and Child Health programs limited to the lesser of the reasonable cost of such services under Medicare, or the customary charges to the general public for such services, with special provisions applicable to a public provider furnishing services free or at nominal cost. (Sec. 233)

*... Institutional Planning . . .* Requirement that institutional providers of services under Medicare have a written overall plan and budget reflecting an operating budget and a capital expenditures plan. (Sec. 234)

*... Claims Processing and Information Retrieval Systems . . .* Federal matching funds under Medicaid for the cost of designing, developing and installing mechanized claims processing and information retrieval systems at a rate of 90 percent, and 75 percent for the operation of such systems, including any contracting for operating the system. . . . Also funds for cost determination systems for state owned general hospitals. (Sec. 235)

*... Prohibition Against Reassignment . . .* Reassignment of claims would be prohibited, thus limiting payment under Medicare and Medicaid generally to the patient, his physician, or other person providing the service, unless the physician or other person is required as a condition of employment to turn his fees over to his employer or unless he has an arrangement with the facility in which the services were provided under which the facility bills for the services. (Direct payment could also be made to a foundation, association, plan, or contractor which provides and administers health care through an organized health care delivery system.) (Sec. 236)

*... Utilization Review Requirements . . .* Requirement that hospitals and ECF's participating in Medicaid or Title V programs must have those patient cases reviewed by the same utilization review committee as is already reviewing their Medicare cases (or, if one does not exist, by a review group which meets Medicare standards). This requirement may be waived, however,

where an alternate system has been approved by the Secretary. (Sec. 237)

... *Unnecessary Admission*... Authority to the utilization committee to notify the physician, patient, and hospital that payment for services by Medicare will cease in three days in not only those cases where the Committee finds that hospital or extended care stay is no longer necessary, but also in cases where admission was not necessary. (Sec. 238)

... *State Health Agency Functions*... Requirement that the state health agency (or other appropriate state medical agency) be the certifying agency within the state for health facilities for participation in the Medicare, Medicaid, and the Maternal and Child Health programs. . . . Also required are state plans for the review of the appropriateness and quality of health care furnished under Title XIX and Title V. (Sec. 239)

... *Medicaid and Comprehensive Health Care*  
... Permission to States to waive federal statewide and comparability requirements if a state contracts with an organization which has agreed to provide health care and services in addition to those offered under the state plan to eligible people who reside in the geographic area served by such an organization and who elect to obtain such care and services from the organization. Payments could not be higher on a per capita basis than per capita payments for other Medicaid recipients in the same general geographic area who are not under the proposed arrangement. (Sec. 240)

... *Qualifications for Certain Health Care Personnel*... A direction that the Secretary establish a program to determine the proficiency of health personnel who lack formal educational or professional membership requirements to perform their duties and functions. Persons then found qualified may provide services under Medicare and Medicaid. (Sec. 241)

... *Penalties*... Among penalties under Medicare and Medicaid would be added: soliciting, offering, or accepting kickbacks or bribes, including a rebate for patient referral, and concealing or failing to disclose knowledge of any event affecting a person's right to any benefit payment with the intent to defraud, or for converting benefits or payments to improper use. (Penalty: \$10,000 or imprisonment for up to one year.) Misrepresentation of health and safety conditions and operating conditions in health care facilities

to qualify under Medicare and Medicaid would be subject to six months imprisonment, a \$2,000 fine, or both. (Sec. 242)

... *Provider Reimbursement Review Board*... Establishment by the Secretary of a five-member Provider Reimbursement Review Board to hear appeals from final decisions of a fiscal intermediary, by a provider if the amount at issue is \$10,000 or more, or by a group of providers on a common cause if the amount at issue aggregates \$50,000 or more. Board decisions would be final unless Secretary on his own motion reversed or modified the decision adversely to the provider, in which case the provider will be entitled to court review. (Sec. 243)

... *Validation of JCAH Surveys*... Authorization to the Secretary to enter into an agreement with any state under which the appropriate state or local certifying agency would survey JCAH accredited hospitals on a sample basis or, where the Secretary deems appropriate on the basis of substantial allegation of the existence of a condition significantly adverse to the health of patients. If the Secretary finds following a survey that an institution has significant deficiencies, then, after due notice, the institution could be disqualified as a Medicare provider, notwithstanding JCAH accreditation. (Sec. 244)

... *Durable Medical Equipment*... Authorization to the Secretary to experiment with reimbursement approaches with respect to rental or purchase of durable medical equipment. (Sec. 245)

... *Skilled Nursing Facilities*... Elimination of separate requirements and separate certification procedures under Medicare and Medicaid for skilled nursing facilities, and establishment of a single set of requirements. (Sec. 246)

... *Skilled Nursing Home Services*... Establishment of a common definition of care requirements for extended care services under Medicare and skilled nursing services under Medicaid. . . . Such services would be those provided directly by or requiring supervision of skilled nursing personnel which the patient needs on a daily basis and which as a practical matter could only be provided in a skilled nursing facility on an inpatient basis. (Sec. 247)

... *Fourteen-Day Transfer Requirement*... Modification of the 14-day transfer requirement, to permit a patient to enter a skilled nursing facility within 28 days after hospital discharge

where the delayed admission occurred because of a shortage of appropriate bed space, or within such time as it would be medically appropriate to begin an active course of treatment for a condition not requiring such care within 14 days after discharge from a hospital. (Sec. 248)

*... Reimbursement Rates for Skilled Nursing Homes and Intermediate Care Facilities...* Requirement that States reimburse skilled nursing and intermediate care facilities on a reasonable cost related basis by July 1, 1976, rising acceptable cost finding techniques approved and validated by the Secretary. (Sec. 249)

*... Medicaid Certification and Approval of Skilled Nursing Facilities...* Determination of basic eligibility of skilled nursing home under Medicaid to be made by the Secretary, with appropriate state agency surveying facilities and reporting findings to the Secretary. A state could, for good cause, decline to accept as a participant in the Medicaid program a facility, even though certified by the Secretary. (Sec. 249A)

*... Medicaid Compensation for Inspectors...* Beginning October 1, 1972, and ending June 30, 1974, the federal government will pay 100% of a state's costs of training and compensating personnel responsible for inspecting long-term care facilities to determine whether they comply with applicable Medicaid health and safety standards. (Sec. 249B)

*... Disclosure of Performance Information...* Requirement that the Secretary make public the following evaluation and reports: (1) individual contractor performance reviews and other formal evaluations of the performance of carriers, intermediaries, and state agencies, including the reports of followup reviews; (2) comparative evaluations of the performance of contractors; (3) program validation survey reports, with the names of individuals deleted. Public disclosure would not be required until the subject party was given suitable opportunity, not to exceed 60 days, to comment upon the findings and conclusions. (Sec. 249C)

*... Limitation on Institutional Care...* Requirement that federal matching shall not be available for any portion of any payment by any State under Title I, X, XIV, or XVI, or part A of Title IV, of the Social Security Act for or on account of any medical or any other type of remedial care provided by an institution to any individual as an inpatient thereof, in the case of

any State which has a plan approved under Title XIX of such Act, if such care is (or could be) provided under a State plan approved under Title XIX of such Act by an institution certified under such Title XIX. (Sec. 249D)

*... Eligibility under Title XIX for Certain Individuals...* Federal matching would be precluded for that portion of any money payment which is related to institutional, medical, intermediate or other care which is (or could be) included under Medicaid. (Sec. 249E)

*... Professional Standards Review...* Professional Standards Review Organizations (PSRO), organization representing a substantial proportion of practicing physicians, would assume responsibility in local areas, designated by the Secretary of HEW by January 1, 1974, for comprehensive and ongoing review of services covered under Medicare and Medicaid. Review would be made to determine whether services provided were medically necessary, met appropriate professional standards, and in the case of proposed inpatient services, could be provided on an outpatient basis or more economically in a facility of a different type. Only organizations representing a substantial proportion of physicians would be allowed to establish PSRO's until 1976. After 1975 the Secretary could contract with other groups for the performance of this review function, but he could enter such contracts only after finding that local professional groups were unable or unwilling to perform the review function. PSRO's would initially be limited to the review of health care provided by or in institutions, and could assume review of other services only with the approval of the Secretary. (Sec. 249F)

*... Physical Therapy...* Authorizes payment for physical therapy services performed in the therapist's office. (Sec. 251)

*... Colostomy Supplies...* Coverage of certain supplies related to colostomies under Medicare. (Sec. 252)

*... Medicaid Coverage Prior to Application...* Extension of coverage for Medicaid care and services furnished in or after the third month prior to an application by those individuals who were otherwise eligible when the services were received. (Sec. 255)

*... Hospital Admissions for Dental Services...* Dentist certification of the necessity for inpatient hospital admission of his patient for dental services in those instances where the patient has other

impairments so severe as to make hospitalization necessary. (Sec. 256)

... *Prosthetic Lenses*... The definition of "physician" under Medicare would be modified so as to include optometrists, but only with respect to establishing the need for prosthetic lenses. (Sec. 264)

... *Optional Medical Social Services—ECF*... Eliminates any requirements by extended care facility under Medicare to provide medical social services. (Sec. 265)

... *Waiver of Registered Nurse Requirement*... Authorization to Secretary to waive under certain conditions the requirement that a skilled nursing facility in a rural area must engage the services of a registered professional nurse for more than 40 hours a week. (Sec. 267)

... *Requirements for Nursing Home Administrators*... Authorization to the State to grant a permanent waiver from Title 19 requirements for licensure to those individuals who served as nursing home administrators for the three-year period preceding the year the State established a licensure program. (Sec. 269)

... *Increase in Medicaid Payments to Puerto Rico and the Virgin Islands*... Increases the total amount which the Secretary may certify for payment to Puerto Rico under Medicare for one year from \$20 million to \$30 million. Similarly increases Medicaid payment which may be made to the Virgin Islands from \$650,000 to \$1 million. (Sec. 271)

... *Medical Assistance in Puerto Rico, the Virgin Islands, and Guam*... Delays from June 30, 1972, to June 30, 1975, the date at which "free choice" of institutional or other providers under Medicaid becomes effective for Puerto Rico, the Virgin Islands, and Guam. (Sec. 271A)

... *Chiropractor Services under Medicare*... Extension of Medicare to include chiropractic services. Includes as a "physician" a chiropractor who is licensed as a chiropractor in his state (or is otherwise legally authorized by the state) and meets federal standards, but is included only for covered services limited to treatment by manual manipulation of the spine "to correct a subluxation demonstrated by X-ray to exist." (Sec. 273)

... *Chiropractors' Services under Medicaid*... When included in the State plan, chiropractic services covered when furnished by a chiropractor

who is licensed as such in the State and who also meets federal standards to be promulgated under Medicare. Covered services consist of treatment by means of manual manipulation of the spine. (Sec. 275)

... *Services of Podiatric Residents and Interns*... Intern and residency program for podiatrists would be approved teaching programs under Part A of Medicare. (Sec. 276)

... *Skilled Nursing Facilities*... Extended care facilities and skilled nursing homes redesignated as skilled nursing facilities for purposes of Medicare and Medicaid. (Sec. 278)

... *Laboratory Billing of Patients*... Authorization to Secretary to negotiate a payment rate acceptable to laboratories for diagnostic tests, which payment will be considered as full charge for such tests. The negotiated rate would be limited to an amount not to exceed the total payment which would have been made in the absence of such rate. (Sec. 279)

... *"Physicians' Services" under Title XIX*... Definition of physician under the Medicaid program would be amended to specify the services of a duly licensed doctor of medicine or osteopathy as one of the mandatory items of health care services. (Sec. 280)

... *Recovery of Incorrect Payments*... Presumption that any over-payment discovered after the expiration of three years will have been made without fault on the part of the provider and that no collection should be made. . . . Additionally, the Secretary would be authorized to deny claims for reimbursement made after the lapse of a reasonable period of time of not less than one nor more than three years. . . . Requirement that providers (or physicians or others where they have accepted assignments) where collection of an overpayment is made from the provider or others, be prohibited, after three years, from charging beneficiaries for services found to be medically unnecessary or custodial in nature, in the absence of fault on the part of the beneficiary. (Sec. 281)

... *Conditions of Coverage of Outpatient Speech Pathology Services*... Coverage of outpatient speech pathology services under Part B to include speech therapy furnished to beneficiaries under the care of a physician by a provider of services, organized agencies, clinics, or health centers. (Sec. 283)

. . . *Medical Assistance Advisory Council* . . . Elimination of the Medical Assistance Advisory Council. (Sec. 287)

. . . *Health Insurance Benefits Advisory Council* . . . Modification of the role of HIBAC to provide advice and suggestions for the consideration of the Secretary on matters of general policy with respect to Medicare and Medicaid programs. (Sec. 288)

. . . *Administrator of Social and Rehabilitation Service* . . . Requirement that new appointments to the office of Administrator of Social and Rehabilitation Service be made by the President, with the consent of the Senate. (Sec. 294)

. . . *Repeal of Section 1903(b)(1)* . . . Deletion of maintenance of effort requirement for care of people 65 and over in mental hospitals under Medicaid program. (Sec. 295)

. . . *Intermediate Care Furnished in Mental and Tuberculosis Institutions* . . . When a State chooses to cover individuals age 65 or over in institutions for tuberculosis or mental diseases it must cover such care in intermediate care facilities as well as in hospitals and skilled nursing homes. (Sec. 297)

. . . *Independent Review of Intermediate Care Facility Patients* . . . Requires independent medical audit of Medicaid patients in all intermediate care facilities. (Sec. 298)

. . . *Intermediate Care, Maintenance of Effort in Public Institutions* . . . A State or political subdivision responsible for the operation of a public institution for the mentally retarded under the Medicaid program will not be allowed to reduce services in such institution below the average amount expended in the four quarters preceding the quarter in which the state elected to make such services available. (Sec. 299)

. . . *Treatment in Mental Hospitals for Individuals undr Age 21* . . . Authorization of federal matching under Medicaid for eligible children under age 21 receiving inpatient care and treatment for mental diseases. (Sec. 299B)

. . . *Survey Report Information* . . . Requires

public disclosure of information concerning state surveys to determine compliance with statutory conditions of participation under Medicare and Medicaid by institutional providers, including health care facility, laboratory, clinic, agency or organization. (Sec. 299D)

. . . *Family Planning Services Mandatory under Medicaid* . . . Federal funding of family planning services for present and former welfare recipients of child-bearing age and also for those persons likely to become welfare recipients in the absence of such services would be increased by authorizing 90% federal funding for state family planning programs. These programs would include both counseling and the provision of medical and social services. A penalty of loss of 1% of AFDC matching will result where State fails to conform or supply recipients with requested family planning services. (Sec. 299E)

. . . *Child Health Screening Services* . . . The federal share of AFDC matching funds will be reduced by 1% if a state in the prior year has failed to inform at least 95% of the AFDC families of the availability of health care screening, or has failed to provide for such services, or has failed to arrange for corrective treatment for children disclosed by such screening as suffering illness or impairment. (Sec. 299F)

. . . *Chronic Renal Disease* . . . Disability status under SSA is provided to individuals who have not attained the age of 65, and are fully or currently insured under social security, or receiving cash benefits and their dependents, and who are medically determined to have chronic renal disease requiring hemodialysis or renal transplant. A qualified individual would be entitled to Medicare coverage after a waiting period following initiation of a course of renal dialysis. Eligibility would expire following a period after a kidney transplant or the termination of renal dialysis. (Sec. 299I)

. . . *Elimination of Part B Coinsurance Payment for Home Health Services* . . . Part B of Medicare would be modified to provide reimbursement for 100% of the cost of home health services. (Sec. 299K)

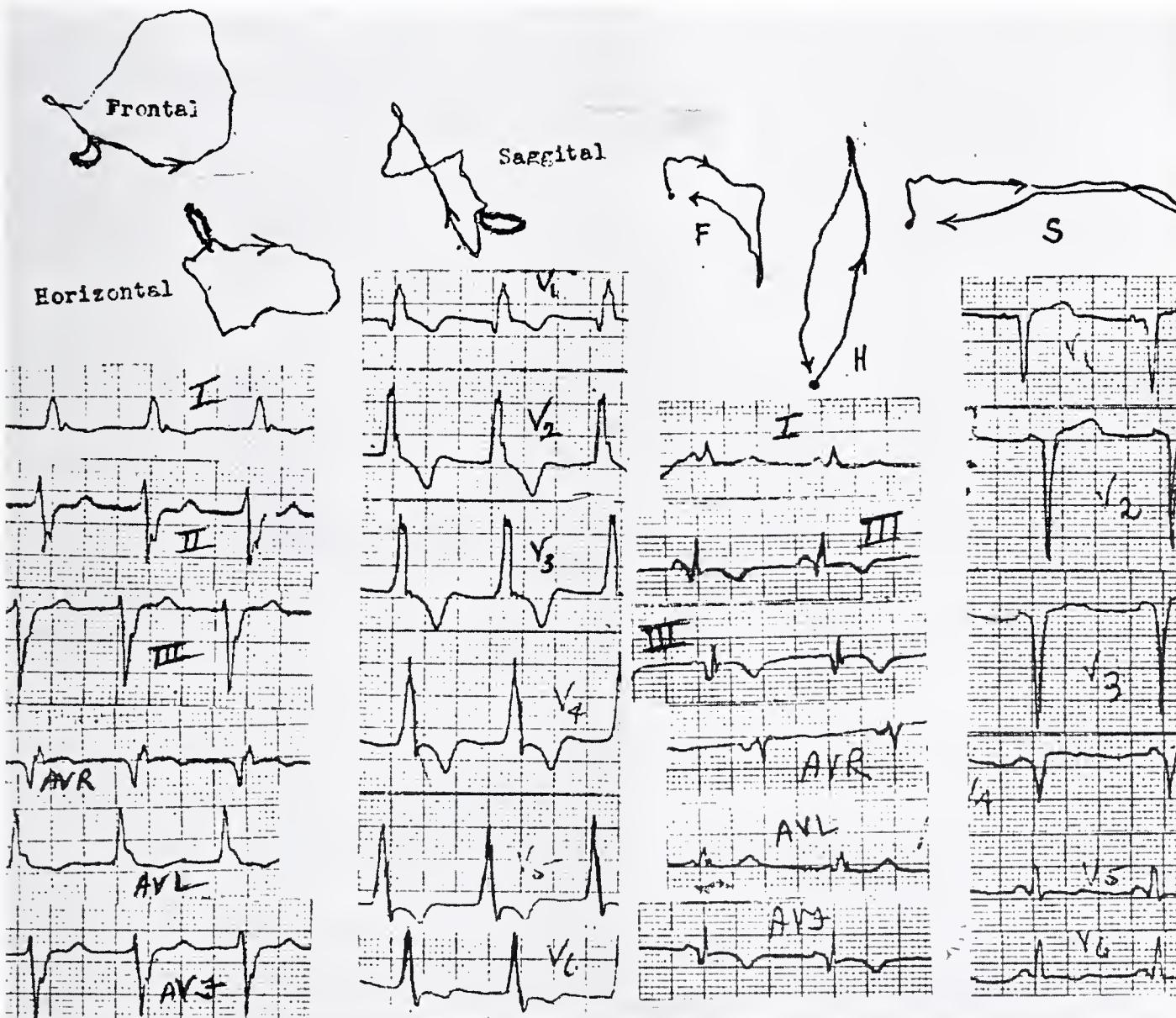


# ELECTROCARDIOGRAM

# OF THE MONTH

The Department of Cardiology, University of Arkansas Medical Center

(See Answer on Page 215)



#6A

#6B

July 26, 1966. 47-year-old white male, had first heart attack 1958; placed on quinidine. Has subsequently had two more heart attacks. On no medications at this time.

John Douglas, M.D., Assistant Professor of Medicine  
University of Arkansas Medical Center  
4301 West Markham  
Little Rock, Arkansas 7205

August 4, 1966. Note changes in 9-day interval.



## Division of Drug Abuse Control

The Division of Drug Control, Bureau of Environmental Health Services, at birth became another vertebrate in the backbone of the Arkansas State Department of Health.

Slowly, other Divisions which had been responsible for drug handling were freed of this responsibility and a centralized drug dispensing area was created. Utilization levels of medication for each of the 82 Local Health Departments can now be regulated.

The authority of the Division of Drug Control stems from passage of Act 590, 1971 (Arkansas version of the Uniform Controlled Substances Act). The State controls established by this act are of benefit to all Arkansas citizens, legitimate handlers of controlled substances (as a group), other State agencies as well as the Bureau of Narcotics and Dangerous Drugs.

In Arkansas, as throughout the nation, legitimate drugs which are diverted into illegal channels ultimately become the "street drug" sold by pushers. Adequate State level controls and enforcement personnel will greatly deter these activities.

Duplication of effort by State agencies will be avoided by establishing definite boundaries of endeavor. The Division of Drug Control concentrates on routine investigation and accountability checks on controlled substances as does the Board of Pharmacy, when indicated. The Division of Hospital and Nursing Homes of the State Health Department concentrates on overall evaluation of institutions and pharmacy-pharmacist activities in these institutions. The Bureau of Narcotics and Dangerous Drugs also will be involved in the sharing of services.

Routine inspections of controlled premises will be conducted, records inspected and/or copied and the information fed to a centralized data compilation area. Inventories of question-

able stock will be made and definite accountability checks made when indicated.

The Drug Abuse Laboratory is the only centralized source of data in Arkansas which can provide an approximate range of information on drug abuse and abusers. The data provided by the Laboratory is not only necessary, but fundamental when used to estimate the growing State-wide abuse problems. Still, this data cannot be quoted as "exact". It reflects only the confiscated specimens and number of persons arrested, not the drugs nor the abusers still "on the street".

During the six year period from 1966 thru 1971 a total of 4,741 samples were tested. This was an increase of 912 percent.

1,804 unidentified, uncontrolled samples  
223 narcotics, increase of 523 percent  
936 marihuana, increase of 3,675 percent  
173 LSD, increase of 175 percent  
427 depressants, increase of 1,500 percent  
1,153 stimulants, increase of 1,197 percent

Confiscated samples are analyzed quantitatively and qualitatively during identification of one to twenty diverse substances. Chemists, after identifying a sample from a maximum of ten tests, are required by law to give expert testimony at hearings and trials. A total of 298 days has been spent in courts since January of 1970. Sometimes the chemist appears in as many as five cases per day.

The third facet of the Division of Drug Control is drug education. Education has to be a long-term solution to many of the problems associated with drug abuse.

The answer to when should it begin is ideally in the home, but realistically in kindergarten, and should be carried on through grade twelve. It also should be incorporated into student teaching programs in colleges and universities. Teachers

already employed should be given in-service education as should parents, church groups, businessmen and children not in school. No program of drug education will be effective until the community, as a whole, becomes concerned, involved and committed.

Under the Division of Drug Abuse Control's proposal, State-wide seminars will be held in each of the 75 counties. These seminars are designed specifically to encourage school principals to institute drug education into the school curriculum. For commitment, the principals will send one teacher to a three-day drug training workshop. Ideally, the teachers will return to their respective schools to begin an educational program.

Staff present to carry out the three facets of the Division of Drug Control are a Pharmacist Administrator, Investigator, Administrative As-

sistant, two Secretaries, Laboratory Administrator, two Chemists and a Laboratory Technician. Each of the professional personnel has had extensive training in all aspects of the drug problem. More staff with more training will be needed to expand the program to provide more adequate surveillance of Arkansas' drug problem.

The aspect of drug abuse which has always been overlooked is the need for a complete Drug Treatment Program. At the present time, the only place for drug abusers to go is the Arkansas State Hospital. Much stigma is attached to this particular type hospitalization, therefore a tremendous number of people do not seek treatment. If there were a centrally located facility for help much of the problem of continuing drug abuse (addiction) could be alleviated and many of the "desperate" people could be helped.



## THINGS TO COME



### American Board of Family Practice to Give Examination

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Each physician desiring to take the examination must file a completed application with the Board office no later than August 1, 1973. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary  
American Board of Family Practice, Inc.  
University of Kentucky Medical Center  
Annex #2, Room 229  
Lexington, Kentucky 40506

### Coronary Care Courses Offered

The faculty of the Coronary Care Unit of the University of Arkansas Medical Center (under the direction of Dr. Malcolm Pearce) will conduct a five-day basic and advanced course in coronary care in January or February 1973 at

the Medical Center. Inquiries should be directed to: Department of Continuing Education, University of Arkansas Medical Center (Slot 525), Little Rock, Arkansas 72205.

### ANSWER—Electrocardiogram of the Month

#6A: Regular rhythm at 96/min without discrete P waves; QRS = 0.13 sec. The initial force is abnormal being right to left, inferiorly, away from V<sub>1</sub> and perpendicular to V<sub>2</sub>. The terminal QRS is abnormally long, superior and rightward. The terminal force looks like RBBB, but in pure RBB you should have a normal initial force . . . this fact is why it is often possible to read infarction "patterns" in the face of RBBB. The prominent Q in V<sub>1</sub> is ominous, suggesting a low septal infarction. The poor generation of posterior and inferior forces (seen best on the saggital plane loop) suggests an inferior, and posterior loss of myocardium. This may represent a diffuse infarction also involving the conduction system of the R bundle and the ant. division of the left, or it may represent left posterior fascicular pacemaker with an inf-septal infarction.

#6B. Several days later. Reg. rhythm at 68/min, with short PR interval of 0.10 sec, QRS of 0.07 sec and normal QT interval. The terminal QRS force is no longer abnormal but the initial QRS force is directed abnormally superior, posterior and leftward, reflecting loss of inferior and anterior myocardial forces . . . i.e. an anterior-inferior infarction . . . (big Q's in II, III, AVF, no R's in V-1-4). ST segment flattening and T-wave inversion suggest ischemia. The basis for the short PR interval in this tracing is unknown. It may reflect a coronary sinus or low atrial pacemaker, or a Low Gonow Levine type syndrome. The ischemic lesion producing the severe conduction disturbance of #6A has apparently regressed.



## EDITORIAL

# Cooperation of Physicians and Clergy In Treating the Whole Patient

Joe E. Holoubek, M.D.\*<sup>1</sup>, Charles L. Black, M.D.\*\*<sup>2</sup>, Alice Baker Holoubek, M.D.\*\*\*<sup>3</sup>

Throughout the history of man, the art of healing has been closely interwoven in the spiritual and physical realms. For centuries, and still in some areas of the world, the physical, as well as the spiritual care of an individual has been performed by one individual. However, in recent centuries, there has been a division of the two professions. A lack of communication has developed, which leads, in certain areas, to misunderstanding and often distrust. Many churches have attempted to re-establish a close communication between the clergy and the physicians of their faith, such as the Guild of Catholic Psychiatrists, the Catholic Physicians' Guild, the Christian Medical Association, and the St. Luke's Guild, and others. This has resulted in a great deal of cooperation between clergymen and physicians in the restricted areas. However effective these separate, isolated, denominational groups are, they are limited in scope. A group under the sponsorship of one religious organization has little, if any, appeal to members of another sect, even though the programs may be of inter-faith interest.

Realizing that the close cooperation between the physician and the clergy leads to better total patient care, the American Medical Association organized a Department of Medicine and Religion in 1961 for the purpose of bringing members of the two professions together in dialogue, to promote future communication and to increase

understanding between the two disciplines, thus leading to the better care of the whole man. The American Medical Association Board of Trustees Committee of Medicine and Religion, which includes physicians and clergymen, guides the department in its work.<sup>1</sup> Each state medical society and each county medical society is urged to also have a Committee of Medicine and Religion and to establish programs best suited for the area. Programs have been developed on the state and county level for physicians and clergymen and the general public and in medical and theological schools.<sup>2</sup> This program has met with great success throughout the country.

The Committee of Medicine and Religion of the Shreveport Medical Society was established in 1964 with two co-chairmen and five other members representing many faiths, races and national origins. Programs were planned which were best suited for the area, which contained approximately three hundred thousand people, four hundred physicians, three hundred and fifty-five churches, a new medical school, numerous private hospitals and one charity hospital, a United States Veterans Facility Hospital and United States Air Force Base. From the onset, close cooperation developed between the Committee of Medicine and Religion of the Shreveport Medical Society and the Hospital Workshop Committee of the Shreveport-Bossier Ministerial Association. This cooperation has helped materially in developing this program.

The Annual Ministers' and Physicians' Day was inaugurated in 1964 and has been held regu-

\*Clinical Associate Professor of Medicine, Louisiana State University School of Medicine, Shreveport, Louisiana.

\*\*Professor of Surgery, Associate Dean, Louisiana State University School of Medicine, Shreveport, Louisiana.

\*\*\*Clinical Instructor, Department of Medicine, Louisiana State University School of Medicine, Shreveport, Louisiana.

larly since that time. Physicians, ministers and their wives are invited to the program which is usually held at the Convention Hall. Topics which have been discussed are: "The Physician and the Minister as a Team for the Chronically Ill", "Alcoholism", "Problems of Youth", "Religion in the Post War Years", "Marriage Preparation" and "Marriage Counseling". Each program had one or more physician and clergymen as the principal speaker, followed by a panel discussion. These programs attracted a great deal of attention, with newspaper, radio and television coverage. Clergymen from as far as one hundred miles came to attend and take part in these programs.

As a closer relationship between the physicians and the clergymen developed, and it became obvious that more frequent programs and discussion sessions would be necessary, the general topic of "Marriage" was selected. Quarterly programs were prepared again at the Convention Hall, and at this time, the physicians, ministers and their families, and the general public were invited. Announcements were carried in the newspaper, radio and television and the Church Bulletins. Personal letters and invitations were sent to all the physicians and the clergymen. The subjects that were discussed were: "The Problems of Youth", "The Get Acquainted Years (The First Two Years of Marriage)", "The Maturing Years (Two to Twenty-Five Years of Marriage)", "The Middle Years of Marriage (Twenty-Five to Fifty Years of Marriage)", "The Retired Years", "The Lonely Years — Widowhood and Widowerhood", and "Divorce and Its Effect on the Children". The attendance increased with each program. Physicians, clergymen and married couples and other specialists of all faiths were speakers on the program.

Following this, it was obvious that even more frequent meetings were needed, and a program of "Clinical Pastoral Training" was inaugurated. This program was designed primarily to enable the practicing clergymen to become better acquainted with the newer advances in the field of medicine and psychiatry, and to acquaint the physician with some of the new changes in the field of theology. These sessions were planned on a weekly basis, on a Wednesday afternoon at the Fontainbleau Room of the T. E. Schumpert Memorial Hospital, starting at 1:00 p.m. These sessions consisted of a forty-five minute lecture,

either by a physician, clergymen, or other authority in the field, followed by a one or two hour case discussion, question and answer and dialogue period. There were sixteen sessions in the fall and sixteen in the spring. We are now completing our second year of this program. Forty to fifty clergymen and physicians usually attended each program. A textbook "Psychiatry, Clergy and Pastoral Counseling" was furnished. The following subjects have been discussed: "Abortion", "Adolescence and Family Involvement", "Anger", "Anger, Dealing With One's Own and Others", "Approach to Mental Illness", "Care of the Dying", "Community Resources", "Counseling With Children", "Depression", "The Depressed Person", "Difficult Female Person or Parishoner", "Drugs and Drug Abuse", "Dealing With Parents and Families of Physically and Emotionally Disturbed Children", "Ethics of Transplantation", "The Fatally Ill Child", "Guilt — Normal and Abnormal Variation", "Genetic Counseling", "Genetic Engineering", "Hypnosis", "Hospital Tours — Demonstration of Various Facilities", "Modalities of Psychiatric Treatment", "The Paranoid Person", "Personality Development", "Personality Disorders", "Pre-Marital Counseling", "Problems in Marriage", "Marriage Counseling", "Marriage — The Get Acquainted Years (The First Two Years of Marriage)", "Marriage — The Maturing Years (Two to Twenty-Five Years of Marriage)", "Marriage — The Middle Years (Twenty-Five to Fifty Years of Marriage)", "Marriage — The Retired Years", "Marriage — The Lonely Years, Widowhood and Widowerhood", "Marriage — Divorce and Its Effect on the Children", "Problems of the Aged and the Elderly", "Problems with Alcohol", "Psychosomatic Conditions", "Religion and Psychiatry", "The Pathologist and His Work", "The Sanctity of Life", "Suicide and the Suicidal Person", "Sexual Disturbances", "Sexual Deviations", "Sex Education — How It Is Done and How to Teach Others To Do It", "Schizophrenia", "Sex, Psychological and Physical Aspects", "The Seriously Ill or Dying Patient", "Suffering", "Types of Psychotherapy", "Value System in Psychiatry and Religion", "The Unwed Mother", "The Underprivileged and Poverty," "Worry".

Certificates of attendance of the program have been awarded to those who have attended the sessions. This has been a joint program, spon-

sored by the Committee of Medicine and Religion of the Shreveport Medical Society, the Hospital Work-Shop Committee of the Shreveport-Bossier Ministerial Association, Council of Medicine and Religion, and the Louisiana State University School of Medicine at Shreveport.

During one of these sessions, the Pre-Cana Conference Committee, Shreveport Deanery of the Diocese of Alexandria, outlined the Pre-Cana Program — a program to help prepare engaged couples for marriage. This was well received by the clergymen, and as an outgrowth of this, the Pre-Marriage Conference for Engaged Couples on an inter-faith basis was inaugurated. This program has been discussed in detail in a previous paper.<sup>3</sup> Needless to say, the success of this program has been immediate, with television, newspaper, radio and church bulletins carrying announcements, and it has filled a definite need in the community.

In review of the programs of the Committee of Medicine and Religion of the Shreveport Medical Society, we have had approximately two hundred speakers in seventy-six programs throughout the past six years. These speakers include physicians, clergymen, married couples, psychologists, nurses, dieticians, social workers and a variety of other specialists. During this time, there were eleven out of town speakers who received expenses and an honorarium. All of the local speakers volunteered their services.

The cost of the entire program to the Shreveport Medical Society was approximately seventeen hundred dollars, and to the Shreveport-Bossier Ministerial Association approximately one thousand dollars.

Newspaper and television publicity has been excellent. There have been twenty-five television spots, interviews, or specially prepared programs. There have been seventy-five articles of two or three columns in size in the newspapers with twenty-two pictures. This has carried the message to approximately one million people in the Tri-State Area.

This program is an example of what can be conducted in a community with very little funds by a committee of medicine and religion of a medical society which will benefit everyone. Programs can be varied with the talent available in the community, but most of those can be handled locally.

With increasing cooperation between the physician and the clergymen, a much better service will be given by both to the ill as well as to the healthy of the community.

#### BIBLIOGRAPHY

1. Brochure, American Medical Association, Department of Medicine and Religion, 1971.
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#### **Postoperative Pulmonary Atelectasis and Collapse and Its Prophylaxis With Intravenous Bicarbonate**

M. O'Driscoll (Bristol Royal Infirmary, Bristol, England)

*Brit Med J* 4:26-27 (Oct 3) 1970

Of 181 patients undergoing major abdominal surgery, 116 developed radiological chest complications associated with metabolic acidosis, low arterial  $\text{PCO}_2$ , depressed tidal volume, increased respiratory rate, but no increase in minute volume. In a matched group of 116 similar patients given intravenous bicarbonate in the first post-operative 24 hours to control or prevent metabolic acidosis, only 15 developed chest complications. Intravenous bicarbonate was shown to have a very profound effect on tidal and minute volumes of acidotic patients with pulmonary collapse and atelectasis.



#### **Screening of Bacteriuria in Pregnancy**

D. H. Lawson and A. W. F. Miller (Royal Maternity Hosp, Rottenrow, Glasgow, Scotland)  
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The incidence of asymptomatic bacteriuria in 1,160 patients screened in early pregnancy was 4.6%. This finding was based on the examination of a single midstream specimen of urine. The incidence of bacteriologically confirmed urinary tract infection developing during pregnancy in the whole group was 4.1% and in the bacteriurics, 16.6%. Only 19.1% of patients who developed an acute urinary infection during pregnancy had bacteriuria on initial screening. The value of screening for bacteriuria as a method of preventing acute pyelonephritis is questioned; laboratory resources might be better concentrated on the follow-up of patients who develop a proved infection during pregnancy.

## M E D I C I N E   I N   T H E



### THE MONTH IN WASHINGTON

The American Medical Association supported a two-year extension of the federal National Health Service Corps program under which Public Health Service personnel are assigned to areas with critical health manpower shortages.

Richard E. Palmer, M.D., a member of the AMA Board of Trustees, told the House Health Subcommittee, that the Association believed that the NHSC program which got underway 18 months ago, was having "an auspicious beginning" and promised "to help alleviate the mal-distribution of health personnel affecting shortage areas." He said, "its capabilities for bringing needed services into shortage areas are yet to be fully demonstrated."

"Additional experience will permit a fuller evaluation of the program's potential," Dr. Palmer said. "In supporting the NHSC, however, we believe it is essential that incentives now contained in the program are retained so that we may hopefully achieve our overall objective of meeting community needs on a long-term, continuing basis."

The AMA spokesman objected strenuously to a proposed deletion of a requirement for certification by state and district health societies that such health personnel are needed before assignment to a particular area.

"... Much of the... planning to date has been centered around community participation in the NHSC program to further encourage the Corps physicians, dentists and other professionals to feel they are part of the community life," Dr. Palmer said. "We urge this committee not to take any action now which would block communities and professionals from attaining this goal."

"Certification by the physician's or dentist's peers — the local members of his own profession — that his services are needed, together with concurrence by local government, provides the strong and necessary base of community acceptance and participation in his assignment. Removing this

base could erect barriers and prevent the level of contact and rapport with peers which are significant factors in stimulating the professional man to establish professional roots in a community.

"Furthermore, the record of cooperation by the medical profession at the local, state, and national levels speaks against the proposed amendment deleting the certification provision. The AMA has worked closely with the NHSC to help make the NHSC a reality.

"... At the Corps' request, the AMA has also distributed to all state medical associations and county medical societies brochures on the program, together with lists of NHSC personnel in central and regional offices to be contacted, requesting assistance in identifying areas particularly short of health manpower. All of these activities, and others, have been undertaken to inform state and local medical societies of the program's interest, method of operation, and goals.

"Most recently the Association has contracted with the Corps for the AMA to recruit physicians to serve in areas of need on a short-term basis. This undertaking, which we call "Project U.S.A." will be a valuable adjunct to the Corps in its operational phases of its program.

"In short . . . the AMA has actively provided assistance in the implementation of the NHSC. The medical profession shares . . . with government, and with communities the common goal of getting needed medical services into shortage areas.

"Even more directly than our activities at the national level, we believe that the measure of success to date of this new program can be attributed to the cooperation received at the local level from the various medical communities. It should be kept in mind that the great number of assignments of physician personnel made in this program to date have been possible because the local and state societies have certified to the need for such health personnel. As a fact, in

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N E W S

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some instances, the medical society has been a moving party in seeking assignment of personnel under this program.

" . . . we believe that the foregoing is strong evidence that the active participation of organized medicine is to the advantage, and not to the detriment of the program. We must assert strongly that we are opposed to the deletion of the present certification requirements in the law. The record of cooperation warrants continuing these requirements. The absence of such requirements could defeat the goal we all share."

The AMA also recommended:

Continuation of a provision giving the Secretary of Health, Education and Welfare latitude as to the use of PHS facilities, rather than requiring their use as proposed.

Against providing additional medical training scholarship arrangement in connection with the program.

\* \* \*

President Nixon signed into law legislation providing for expanded research programs to combat heart and lung diseases.

The National Heart and Lung Institute is authorized to increase its expenditures for such research to \$1.38 billion over the next three years.

The new law provides for a comprehensive program for research into the cause and the prevention of all forms of heart, lung, and blood diseases; research into basic biological processes; research into techniques, drugs and devices used in diagnosis and treatment; establishment of programs for field studies and large-scale testing and demonstration of preventive therapeutic and rehabilitative approaches, including emergency medical services for persons suffering from heart and lung diseases; public and professional education relating to all aspects of these diseases.

The bill also authorizes the Heart and Lung Institute to provide for the development of 15 new centers for basic and clinical research into the diseases of the heart, blood vessels, and blood, and 15 new centers for basic and clinical research into lung diseases.

The research program for these diseases is upgraded similarly to the expansion of cancer research authorized last year.

\* \* \*

Establishment of a military medical school is authorized under a recently enacted law.

A companion program will provide up to 5,000 full federal scholarships in effect at one time for would-be physicians to go to civilian medical schools if they agree to serve in the armed services for five to seven years after graduation. The scholarships would provide the full cost of tuition and fees and \$100 a week living allotment.

The military medical school is to be called the Uniformed Services University of the Health Sciences and is to be located within 25 miles of Washington, D. C. It will be set up to have 100 graduates a year.

Authorization of the military school capped with success a long fight of Rep. F. Edward Hebert (D., La.), chairman of the House Armed Services Committee. This year, the House approved the school but the Senate only approved a study of the proposal. However, Hebert succeeded in getting the House-Senate conferees to approve establishment of the school.

A report on the conference on the legislation said the Senate conferees "pointed out their concern over the apparent lack of any clear consensus in the government and the health professions as to the need and desirability of establishing such a university . . . and questioned the overall philosophy embodied in the principle of establishing a university of this type entirely supported by federal funds."

Related legislation, which was supported by the American Medical Association, would raise the pay of military physicians to attract them to the armed services. Ernest B. Howard, M.D., Executive Vice President of the AMA, wrote the House Armed Services Committee:

"The American Medical Association supports the principle of providing special incentives through which the Armed Forces may secure and retain qualified medical officers on active duty. This approach is entirely consistent with the concept of an all-volunteer Armed Force, which would require adequate manpower in the critical health professions. We support incentives designed to provide adequate medical manpower on a more equitable financial basis."

\* \* \*

A report of the National Cancer Institute indicates a substantial betterment in patient survival in some forms of the disease.

The fourth annual "End Results in Cancer" was prepared by the Institute-sponsored End Results Group. It summarizes the survival experi-

ence of white patients diagnosed with cancer from 1940 through 1969 in more than 100 United States hospitals. Similar information on black Americans is currently being collected and analyzed for future publication. The data cover 25 anatomical sites of cancer, treated by surgery, radiation and chemotherapy. Varying survival rates up to 15 years are given for each form of cancer.

The report indicates several cancer sites for which there is marked improvement in patient survival. The three year survival rates for patients whose cancers were diagnosed from 1965-69 show an increase over the rates of those diagnosed from 1940-49 for the following:

Types of Cancer	3-Year Survival 1940-49	3-Year Survival 1965-69
Bladder	48%	62%
Brain	28	37
Chronic lymphocytic leukemia	33	53
Larynx	47	67
Melanoma of the skin	49	74
Multiple myeloma	10	27
Prostate	49	66
Thyroid	67	86

#### Other findings in the report:

Other cancers for which there have been important increases in patient survival since the 1940's are childhood leukemia, Hodgkin's disease and breast cancer. The one year survival rate for children under 15 with leukemia indicates continuing progress and provides hope for further improvement. The rate has increased from 36 per cent in 1955-64 to 59 per cent in 1965-69. Among children with acute lymphocytic leukemia diagnosed in 1965-69, the one year survival rate was 67 per cent. Due to greatly improved methods of chemotherapy, radiation techniques and life support systems, the three year survival rate for children has increased from less than 6 per cent to 15 per cent over the past 10 years. This represents the results achieved in a broad cross-section of hospitals.

Similar progress has also been noted in the treatment of patients with Hodgkin's disease. Twenty years ago only 35 per cent of Hodgkin's disease patients survived three years; among patients diagnosed in 1965-69, 61 per cent survived three years.

The outlook has also been improved for women with breast cancer. For all stages of

breast cancer, the three year survival rate has increased from 63 per cent 20 years ago to 72 per cent in the most recent time period. Of patients with localized disease diagnosed during 1965-69, 91 per cent were alive three years after diagnosis.

However, there has been little or no improvement in life expectancy for patients with lung cancer and cancer of the pancreas. Lung cancer is the most common male cancer with 62,000 new cases and 56,000 deaths annually among U.S. men, and incidence is still increasing. There has been little change since the 1940's in the proportion of cases classified as localized at diagnosis — only 18 per cent in 1965-69. However, treatment results for localized forms of the disease have improved. For all lung cancers, the three year survival rate is only 11 per cent; for localized disease, the three year rate has increased from 17 per cent in the 1940's to 39 per cent in 1965-69.

Survival rates for cancer of the pancreas have shown no improvement over the past 20 years. During this time interval incidence has risen from 7 cases per 100,000 persons to 9 per 100,000. An estimated 19,000 new cases are diagnosed each year in the United States. Over 90 per cent of these patients die within one year. The three year survival rate of the 1940's, 2 per cent, for all stages of this disease has not improved in recent times. Even when detected in the early stages, the three year survival rate is still only 4 per cent.

Most cancers are diagnosed after middle age. Seventy-five per cent of all cancers among U.S. men and 63 per cent of cancers in women are diagnosed at age 55 or over. Generally, the outlook for survival decreases with age. For cancer patients 15 and under, however, life expectancy is as low as for patients 65 years of age or older.

Women survive longer after cancer diagnosis than men. For example, only 31 per cent of men with cancer survive five years or longer while 42 per cent of women patients live 10 years or more. This pattern holds true for localized as well as for all stages of cancer, and for each age group.

The marked survival advantage of female patients is due in part to the fact that for the major cancers in women (breast, colon, uterine cervix and uterine corpus) survival is more favorable than for those occurring most frequently in men (lungs, prostate, colon and bladder). In addition for most cancer sites common to men and women, survival rates are higher for women.

Surgery is the most used form of treatment. During the 10-year period 1955-64, 55 per cent of all patients were treated by surgery, 29 per cent by radiation and 18 per cent by chemotherapy. Although surgery has remained the treatment of choice in recent years, more patients are receiving radiotherapy (34 per cent) and chemotherapy (22 per cent).

Early detection, while the cancer is localized or limited to the organ of origin, offers the best opportunity for control. There has been an encouraging increase in the proportion of cancers of the breast, prostate, bladder, and brain and melanoma of the skin being diagnosed while localized. The percentage of breast cancers localized at diagnosis has increased from 38 per cent to 47 per cent in the past 20 years; for prostatic cancer, the percentage localized has increased from 49 per cent to 63 per cent in the same period.

Women with cancers of the cervix and body of the uterus have a good outlook for survival, particularly when their cancers are diagnosed while localized. The three year survival rates for women with early disease are 82 per cent for cervix and 88 per cent for the body of the uterus. For all stages, long-term survivals are also encouraging, with 10-year survival rates of 55 per cent for women with cervical cancer and 69 per cent for patients with cancer of the body of the uterus.

\* \* \*

#### MEDICAL ASSISTANTS SPONSOR EDUCATIONAL SEMINAR

The Arkansas State Society of the American Association of Medical Assistants held a two-day educational seminar in Little Rock in November. The theme of the seminar was "Keeping in Step". Mrs. Louise Kerby, who is employed by Drs. Ashley Ross and Jerry Thomas in Little Rock, was chairman of the seminar.

Included in the program were "Survey of Arteriography" by Dr. John W. Joyce; "Preparation for Radiographic Examinations", by Miss Cecile Shoptaw, Supervisor of Diagnostic Radiology Section, Arkansas Baptist Medical Center; "The Field of Orthopedic Surgery", by Dr. Ashley S. Ross; "Recent Developments in Endocrinology", by Dr. Raymond Marecek; "Forensic Autopsies", by Dr. Rodney Carlton, State Medical Examiner; "The Risk Factor in Heart Dis-

ease", Dr. Sexton Lewis; "Allergy - A Common Problem", Dr. Thomas G. Johnston; "Sex Education", Dr. Max McGinnis; "Laboratory Tests", Dr. Nils Pehrson; "Medical Ethics", Dr. Morrison Henry and Dr. Gilbert O. Dean; "National Health Insurance", Mr. Paul Rainwater, Arkansas Medical Society staff; "Basic Skills in Communication", by Mrs. Ruth Powell, Assistant Professor of Office Administration of the University of Arkansas at Little Rock. Other subjects covered by the program were "Credits and Collections", "Insurance", "Malpractice", and "Medical Records System". Dr. Joseph A. Norton led the group in a devotional on Sunday morning.

A banquet on Saturday evening honored the twelve medical assistants in Arkansas who have passed qualifying examinations for "Certified Medical Assistant". Dr. William S. Orr, Jr., served as Master of Ceremonies for the banquet. The twelve Certified Medical Assistants and their employers are:

Leodia Guenthner, Saltzman-Guentner Clinic, Mountain Home.

Vera Stemmle, Drs. Meredith and Rittelmeyer, Pine Bluff.

Pebble Watt, Children's Clinic, Pine Bluff.

Marilyn Pryor, Dr. R. H. Chappell, Texarkana.

Edith Moser, Dr. M. J. Kilbury, Jr., Little Rock.

Pat Avery, Ouachita Hospital, Hot Springs.

Patricia Harrison, Dr. Calvin Austin, Mena.

Nan Jones, Drs. Graham and Lincoln, Little Rock.

Joy Adams, Dr. Kenneth Thompson, Fort Smith.

Betty Stipsky, Dr. W. C. Holmes, Fort Smith.

Betty Colvert, formerly employed by the late Dr. W. Gilbert Eberle, II, Little Rock.

Barbara Stillings, Dr. D. B. Stough, III, Hot Springs.

The American Association of Medical Assistants established a Certifying Board in 1961 to administer an annual examination covering the administrative and clinical responsibilities of medical assistants. Satisfactory completion is recognized with presentation of a certificate and the right to wear the coveted CMA pin. The examination is a one-day test given on the campuses of cooperating colleges throughout the United States on the fourth Friday of June.

Those interested in the certification examination may write to the American Association of Medical Assistants, One East Wacker Drive, Chicago, Illinois 60610.

Approximately one hundred and fifty medical assistants from across the State attended the educational seminar. Recognizing that the medical assistants share the physicians' need for continuing education, physician employers paid the

seminar registration fee for almost all participants.

The medical assistants organization has the endorsement of both the American Medical Association and the Arkansas Medical Society. Mrs. Deany Reid, c/o Dr. James Mashburn, 207 East Dickson, Fayetteville, Arkansas 72701, is president of the State Medical Assistants Society. If your assistant is not a member, urge her to join.



## PERSONAL AND NEWS ITEMS

### **Physicians Named Members**

Dr. John E. Allen, Jr., Dr. Frederick T. Fraunfelder, and Dr. Thomas P. Rooney, all of Little Rock, have been inducted into the American College of Surgeons.

### **Medical Laboratory Adds Offices**

Dr. William R. Meredith of Pine Bluff, president of the Jefferson Medical Center, Inc., a firm organized by local doctors, has announced that five new offices and an X-ray Laboratory unit will be added to the Pine Bluff Laboratory at 1718 West 42nd Avenue.

### **Physician Injured**

Dr. George C. Burton of El Dorado was hospitalized with injuries received when the plane he was piloting flipped over on its back while attempting to land at the Downtown Airport in El Dorado. A front wheel of the plane collapsed, causing the plane to overturn.

### **Physician Certified as Diplomate**

Dr. David M. Johnson of Searcy has been certified as a Diplomate of the American Board of Internal Medicine.

### **Physicians Locate**

Dr. Bernice Gotaas began her practice of medicine in Yellville in October.

Dr. Bob W. Smith has joined the staff of the Millard-Henry Clinic in Russellville as a family physician.

Dr. Carl H. Bell, Jr., has established his office at 1115 Cherry Street, Pine Bluff, for the general practice of medicine.

### **Doctors Catch Sailfish**

Dr. H. W. Thomas of Dermott and Dr. Frederick P. Feder of Fort Smith were in a party of five who caught five sailfish while fishing at Acapulco, Mexico. Dr. Thomas' catch was nine feet, ten inches in length and weighed 125 pounds.

### **Physician's Office Burglarized**

The office of Dr. E. J. Ritchie at 1401 Main Street, North Little Rock, was burglarized in early October. A quantity of drugs and money was taken.

### **Obstetricians and Gynecologists Meet**

The American College of Obstetricians and Gynecologists held its annual meeting in October in Hot Springs. Dr. Alfonso Alvarez-Bravo of Mexico City, Mexico, and Dr. Douglas Bevis of Sheffield, England, were guest speakers.

### **New Clinic in Clarksville**

Construction has begun on a new clinic in Clarksville which is being built by the Clarksville Medical Group, P.A. According to Dr. Boyce West, spokesman for the group, the new clinic will provide facilities for six doctors and is expected to be completed in April 1973.

**Dr. Kolb Attends Conference**

Dr. W. Payton Kolb of Little Rock attended the Regional Meeting of the American Foundation for the Blind which was held in Denver, Colorado, October 11th through October 13th. Dr. Kolb was the keynote speaker on October 11th, visited with the workshops on October 12th, heard reports on October 13th, and gave a summation of the program. He attended a similar conference in the Atlanta Region which was held in Fort Lauderdale, Florida, in June.

**Dr. Thicksten Receives Promotion**

Dr. Jack Thicksten of Alma has been promoted from lieutenant colonel to colonel as commander of the 501st Medical Service Flight at Little Rock. Dr. Thicksten has been commander of the Flight since its inception in 1964. The Flight consists of doctors, nurses, dentists, and other medical specialists and technicians who meet once a month and attend an annual fifteen day active duty tour.

**Psychiatric Association Meets**

The Mid-Continent Psychiatric Association, which is made up of members in Arkansas, Oklahoma, Kansas, and Missouri, held its annual meeting October 6th through October 8th in Little Rock. The principal subject of the program was "Alcohol and Drug Abuse and Its Treatment".

**Physicians Named Charter Fellows**

Charter Fellowship degrees were conferred on the following physicians at a Fellowship Convocation held during the national meeting of the American Academy of Family Physicians in New York in September:

- Dr. James D. Armstrong, Ashdown
- Dr. Omer E. Bradsher, Paragould
- Dr. Reuben Chrestman, Jr., Helena
- Dr. Amail Chudy, North Little Rock
- Dr. Harold N. Cogburn, Forrest City
- Dr. Charles E. Crawley, Forrest City
- Dr. John W. Dorman, Springdale
- Dr. C. Randolph Ellis, Malvern
- Dr. Robert A. Etherington, Eureka Springs
- Dr. A. J. Forestiere, Harrisburg
- Dr. Julian L. Foster, Little Rock
- Dr. Ross Fowler, Harrison
- Dr. Buford M. Gardner, Fayetteville
- Dr. David L. Gibbons, Little Rock
- Dr. James B. Holder, Jr., Little Rock
- Dr. Thomas D. Honeycutt, Little Rock

- Dr. Ed G. Hopkins, Van Buren
- Dr. C. Lewis Hyatt, Monticello
- Dr. Frank M. James, Jonesboro
- Dr. Kemal Kutait, Fort Smith
- Dr. Kenneth E. Lilly, Fort Smith
- Dr. Milton Lubin, West Memphis
- Dr. Rex N. Moore, Jacksonville
- Dr. Robert H. Nunnally, Gurdon
- Dr. James K. Patrick, Fayetteville
- Dr. John P. Price, Monticello
- Dr. Joseph S. Robinette, Pine Bluff
- Dr. Guy U. Robinson, Dumas
- Dr. Ben N. Saltzman, Mountain Home
- Dr. G. A. Sexton, Forrest City
- Dr. E. A. Shaneyfelt, Manila
- Dr. John McCollough Smith, Little Rock
- Dr. W. Myers Smith, North Little Rock
- Dr. Alvin W. Strauss, Jr., Little Rock
- Dr. John W. Vinzant, Fayetteville
- Dr. Paul A. Wallick, Monticello
- Dr. John R. Wassell, Little Rock
- Dr. Oba B. White, Little Rock
- Dr. Robert H. White, Malvern
- Dr. Jacob M. Williams, Paragould
- Dr. J. P. Williams, Brinkley
- Dr. George H. Wright, Hope

**Fort Smith Clinic Accredited**

Holt-Krock Clinic in Fort Smith, which has a staff of thirty-eight physicians, has been accredited by the American Association of Medical Clinics. The Certificate of Accreditation was formally presented to Dr. John D. Olson of the clinic staff at the annual meeting of the AAMC in Atlanta, Georgia, in September. The clinic went through the certifying process voluntarily and is the sixty-seventh in the Nation to be so accredited. The primary objective of the accreditation program is to periodically evaluate the conduct, performance and quality of the medical care delivered by group practice clinics in order to certify and accredit them as qualified comprehensive medical and diagnostic centers.

**Dr. Easley Reappointed**

Dr. E. J. Easley of Little Rock has been reappointed to the State Advisory Council, Community Service and Continuing Education Program. It is Dr. Easley's third term on the Council, which is required by the Higher Education Act of 1965. Each term is for a period of two years. Dr. Easley's six years have been served under Governors Faubus, Rockefeller and Bumpers.



## NEW MEMBERS

### Dr. William J. Tolleson

Dr. William J. Tolleson is a new member of the Baxter County Medical Society. He is a native of Amity, Arkansas.

Dr. Tolleson attended Southern State College in Magnolia and was graduated from the University of Arkansas School of Medicine in 1951. He served in the United States Army from 1951 until 1953 and completed his internship at Brooke Army Hospital. His residency work in Internal Medicine was at the Veterans Administration Hospital, Nashville, Tennessee, which he completed in 1956. Dr. Tolleson was affiliated with the Veterans Administration Hospital in Nashville, Tennessee, for seven years, and he was with the Veterans Administration Hospital in Memphis for fourteen years. He served as an instructor in medicine at Vanderbilt University and as associate professor of medicine at the University of Tennessee College of Medicine in Memphis.

Dr. Tolleson is associated with Dr. Ben N. Saltzman, Dr. John F. Guenthner and Dr. Arthur L. Beard at the Saltzman-Guenther Clinic in Mountain Home.

### Dr. Edwin F. Price

Craighead-Poinsett County Medical Society has recently added the name of Dr. Edwin F. Price to its membership roll. Dr. Price is a native of Lawrence, Kansas. He received an A.B. degree from the University of Kansas in Lawrence in 1942 and was graduated from Washington University School of Medicine in St. Louis in 1945. Dr. Price interned at Barnes Hospital, St. Louis. From 1946 until 1948, he served in the United States Army. After completing his residency work in Psychiatry at Washington University School of Medicine in 1951, he was in practice in Los Angeles, California, for fourteen years. Dr. Price served as Clinical Instructor in Psychiatry at the University of California, Los An-

geles School of Medicine from 1953 until 1964, and was director of Los Angeles Psychiatric Service from 1953 until 1959. From 1966 until 1972, he was in practice in Emporia, Kansas, where he served as Consulting Psychoanalyst at Kansas State Teachers College.

Dr. Price is certified in Psychiatry by the American Board of Psychiatry and Neurology. He holds memberships in the American Psychiatric Association and the Los Angeles Psychoanalytic Society.

Dr. Price is associated with the George W. Jackson Community Mental Health Center in Jonesboro.

### Dr. Aubrey S. Joseph

Dr. Aubrey S. Joseph, a native of Beulah, Mississippi, is a new member of the Jefferson County Medical Society. In 1962, he was graduated from Arkansas A & M College and in 1966, he was graduated from the University of Arkansas School of Medicine in Little Rock. He stayed on at the Medical Center in Little Rock for his internship and a residency in Radiology. Dr. Joseph served in the United States Air Force for two years.

He is associated with Pine Bluff Radiologists, Ltd., in Pine Bluff.

### Dr. Edward P. Hammons

A new member of St. Francis County Medical Society is Dr. Edward P. Hammons. Dr. Hammons is a native of Jackson, Tennessee. He received a B.S. degree from Baylor University, Waco, Texas, and was graduated from the University of Tennessee College of Medicine in Memphis, Tennessee, in 1966. Dr. Hammons' internship was served at St. Francis Hospital, Honolulu, Hawaii. His residency work in Surgery was at Methodist Hospital in Memphis, Tennessee, and the Veterans Administration Hospital in San Juan, Puerto Rico.

Dr. Hammons is in the general practice of medicine at Forrest View Clinic in Forrest City.

### Pulaski County

The following interns and residents are new members of the Pulaski County Medical Society:

#### **University of Arkansas Medical Center:**

Alan E. Aycock, Resident — Otolaryngology  
F. A. Bennett, Jr., Resident — Medicine  
John H. Bledsoe, Resident — Surgery  
Fay W. Boozman, III, Resident — Pediatrics  
Steven A. Davie, Resident — Otolaryngology  
John D. Edmiston, II, Intern

## NEW MEMBERS

Joseph P. Fetzek, Resident — Dermatology  
Robert D. Fisher, Resident — Anesthesiology  
James H. Fraser, Jr., Resident — Obstetrics/  
Gynecology  
James H. Golleher, Resident — Pathology  
F. Richard Jordan, Intern — Surgery  
Charles A. Ledbetter, Resident — Orthopaedics  
William Mason, Resident — Medicine  
Kenneth R. Meacham, Resident — Urology  
Ord J. Mitchell, Resident — Neurology  
Thomas B. McGinnis, Resident — Surgery  
Edward R. North, Resident — Orthopaedics  
H. Martin Northup, Resident — Radiology  
Mary L. Powell, Intern — Anesthesiology  
Alvaro Ramirez, Resident — Radiology

James L. Schrantz, Resident — Orthopaedics  
James M. Sims, Resident — Psychiatry  
Alan E. Stallings, Jr., Intern — Anesthesiology  
Ginger T. Turley, Intern  
Jan T. Turley, Resident — Urology  
Paul C. Williams, Resident — Neurosurgery  
Akhtar E. Yusufji, Resident — Urology  
**Baptist Medical Center:**  
Jon R. Ewing, Intern  
Richard Gardial, Intern — Family Practice  
Davis Spurlock, Intern — Family Practice  
**St. Vincent Infirmary:**  
Larry H. Johnson, Intern  
Joe D. King, Intern  
**Veterans Administration Hospital:**  
C. H. Miller, Resident — Thoracic Surgery



## OBITUARY

### Dr. Walter G. Eberle, II

Dr. Walter G. Eberle, II, of Little Rock, died October 10, 1972. He was born October 29, 1933, in Little Rock.

Dr. Eberle was graduated from the University of Arkansas School of Medicine in 1960 and completed his internship at Boston City Hospital, Boston, Massachusetts. He completed a three-year residency in Internal Medicine at Newton-Wellesley Hospital, Newton, Massachusetts. Dr. Eberle was an Associate Fellow in Hematology at the Peter Bent Brigham Hospital, Brookline, Massachusetts, and an Associate Teaching Fellow in Hematology and Cancer Chemotherapy at the New England Deaconess Hospital, also in Brookline. A specialist in hematology and cancer chemotherapy, Dr. Eberle began his practice in Little Rock in 1967.

He was a member of the Pulaski County Medical Society, the Arkansas Medical Society and the American Medical Association.

Dr. Eberle is survived by his widow, Mrs. Joan Bramhall Eberle, one daughter and one brother.

## IN MEMORIAM

### Dr. Roscoe C. Lewis

Dr. Roscoe C. Lewis, outstanding physician and community leader, died May 26, 1972, after living a life dedicated to his family and his fellow man. He beautifully demonstrated the qualities of involvement, intelligent concern, compassion, intelligence and humility that contribute to a life of the highest form. He was a friend as well as a counselor to his patients, a giver rather than a receiver in his community, and a brother in the real sense, not just a professional colleague to the medical community.

There is nothing that can be done to relieve the anguish and loss felt by his family, but we hope that this small tribute will in some way lessen their grief. In the words of Shakespeare, we of the medical community feel, "He was a man, take him for all in all. I shall not look upon his like again". We shall miss him.

Respectfully,

Members of the Ouachita County  
Medical Society  
Dr. James Guthrie, President



January, 1973

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# THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 69 No. 8

FORT SMITH, ARKANSAS

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## Newer Concepts in the Diagnosis and Treatment of Infertility\*\*

Charles B. Hammond, M.D.\*

### INTRODUCTION

**I**nfertility ranks as one of the common causes of marital discord and affects one of every seven couples in the United States. It is a subject about which many excellent articles and textbooks<sup>1-5</sup> have been written, but it is also an area of medicine in which advances have been frequently delayed. This paper will attempt to review our present understanding of the more frequently seen causes of infertility, some diagnostic studies useful for evaluation, and present newer concepts regarding the treatment of several problems. Because of the traditional role of the wife in the responsibility for reproduction it is the obstetrician-gynecologist who is most frequently contacted for initiation of infertility studies. It is from this perspective that this paper is given.

Most authors define sterility as one year of regular coital activity without contraception and without pregnancy. Certainly this adequately defines a couple as infertile and deserving of a survey, but in older couples even this time limit may be excessive. However, if one examines "normal" fertility data we see that even in normal couples conception may not occur during the first few months of exposure. Such data demonstrate that 50% of such couples will conceive within three months of the initiation of unprotected coitus, and that by six months 75-80% of the women have become pregnant. By the end of one year some 80-90 percent have conceived and the remaining small percentage will conceive over the next one to two years. We also must remember that fertility slowly declines with advancing age of both partners.

One must also remember that an infertile marriage may result from the union of two per-

sons of lowered fertility, each of whom may prove fertile when remarried to a person of high fertility. Also, there may be several causes of relative infertility in one or both partners. To evaluate all of these factors an adequate infertility survey should be directed by one physician, with consultation as required, if all such factors are to be identified and integrated into a likely chance for a fertile union.

An infertility survey must begin with a careful history and physical examination of both husband and wife. In addition, one should obtain a thorough infertility questionnaire which includes details of coital technique, frequency, timing and positions as well as obvious problems of severe dyspareunia, impotence, etc. While such clues as amenorrhea, irregular menses and severe dysmenorrhea are usually noted, one often overlooks subtle problems suggesting endocrinopathy, trauma, infection or medications. Such a detailed history and careful physical exam will frequently demonstrate one or more causes of infertility. Basic hematologic and blood chemical studies, Pap smears, cultures of cervical, vaginal or prostatovesicular secretions and routine x-rays (chest and abdomen) often yield other useful data. The most commonly seen causes of sterility, and the frequency of their occurrence are shown in Figure 1.

### MAJOR PELVIC CONDITIONS

Approximately 5% of infertility occurs from gross pelvic abnormalities. These include leiomyomas, which cause infertility by cornual obstruction, endometrial cavity alterations by submucous tumors and by pressure on adjacent organs, notably the ovaries. The presence of small leiomyomas per se do not necessarily cause infertility. Hysterosalpingography is a very useful adjunct to pelvic examination to demonstrate these. Myomectomy offers a possible remedy in

\*Division of Endocrinology, Department of Obstetrics and Gynecology, Duke University Medical Center, Durham, North Carolina.  
\*\*Presented at the Annual Meeting of the Arkansas Medical Society, April 26-29, 1970, Hot Springs, Arkansas.

well selected operative candidates and success afterwards approaches 35%.

Figure 1.

#### MAJOR CAUSES OF INFERTILITY

1. Major Pelvic Conditions	(5%)
2. Cervical Factors	(20%)
3. Tubal Status	(30-40%)
4. Femal Endocrinopathy	(15-25%)
5. Male Causes	(30-40%)

Endometriosis has often been frequently alluded to as a cause of infertility, usually attributed to tubal occlusion and ovation dysfunction. It would appear fixation of the ovaries and/or tubes plays a role in problems of ova transport and fertility. Of interest, despite a very suggestive history, only one patient of four will have palpable findings. Diagnosis depends upon the history and clinical findings and may require endoscopy or celiotomy for a final diagnosis. Therapy revolves about combining surgery and medical pseudopregnancy therapy (prolonged estrogen/progesterone) and depends upon age, parity, and anatomic involvement. Results are fairly good and approaches 35% success.

Grossly recognizable cysts or tumors of the ovaries are occasionally encountered in women who are infertile. Obviously, removal is mandatory and frequently the best clinical study is simply pelvic examination. Obviously, surgical conservation is mandatory in women under 40 and in whom there is no question of malignancy.

Chronic pelvic inflammation, usually gonococcal but not infrequently postabortal, is frequently a cause of infertility from tubal occlusion and chronic endocervicitis. While frequently not recognizable grossly, these are formidable causes of infertility. Further sterility survey must be delayed in patients with grossly palpable, chronic, intrapelvic infection. Many therapies have been suggested including sexual rest, antibiotics, cortisone, heat regimens, and, finally, surgical therapy. Results are poor.

Tuberculosis of the pelvis is now a rarely encountered gross pelvic cause of infertility and diagnosis is best made by histopathologic examination of appropriate surgical specimens. Therapy is drug oriented (INH, PAS, etc.).

Finally, among the gross pelvic causes of sterility one must consider malposition or congenital anomalies of the uterus. Most often malposition (as fixed retroversion) is secondary to chronic infection or endometriosis and probably causes most problems by tubo-ovarian factors. Only rarely are other nonfixed, malpositions a causative factor. Among the congenital malformations of the uterus, congenital absence must obviously be a cause of infertility. Other malformations of the uterus, while unlikely to interfere with conception, are more likely to be a cause of repeated abortion. Surgery is the definitive therapy for these anomalies.

In all of these categories the appropriate diagnostic survey includes fairly simple studies: pelvic exam, hysterosalpingography, abdominal x-ray, endoscopy or other surgical approaches. Success is limited even with vigorous therapy in nearly all categories.

#### CERVICAL FACTORS

Penetration of cervical mucus by a large number of spermatozoa is essential to fertility. It is estimated that 10-25% of infertile couples have some problem with cervical disease. The role of the cervix in infertility may be based on three areas:

Impediments in the cervical canal to the penetration of sperm.

Hostility of cervical secretions to normal spermatozoa and their devitalization. This category embraces ABO incompatibilities wherein antigen-carrying sperm are blocked (or agglutinated) by antibodies in the cervical secretions.

Failure of spermatozoa to ascend above the internal os.

One of the simplest methods of evaluating cervical status is gross examination. This, coupled with Paps (which include an estimate of inflammatory response), cultures, and cervicoisthmography (fractional hysterosalpingogram) all aid diagnosis. Notation of anatomic normalcy, patency, lacerations, gross infection, endocervical infection and possible malignancy are all important. Appropriate therapy is directed by the findings and includes antibiotic therapy, cauterization and conization.

The best single method of evaluating the role of the cervix in fertility probably remains the Sims-Huhner or postcoital test. Despite the technical disagreements in the literature, these are

based on microscopic observations of cervical mucus made some 2-6 hours after coitus. The test should be performed near the time of ovulation when cervical mucus is most receptive to sperm. One inserts a pipette well into the endocervical canal and aspirates the mucus, then transfers it to a slide for evaluation. Factors of importance are:

1. Amount and quality of mucus (Spinnbarkeit and clarity).
2. Presence and numbers of leukocytes and bacteria.
3. Number of normally formed sperm with purposeful motility.
4. Morphologic study of sperm.

Another useful method for seminal evaluation is the seminalysis on fresh ejaculates, and study of number, viscosity, turbidity, morphology, motility, and endurance.

Therapy of male factors will be discussed later, but both diagnostic study and therapy of the female cervical problems are relatively simple, inexpensive, and yield good results.

### TUBAL FACTORS

One of the most frequent causes of infertility is abnormality or obstruction of the fallopian tubes, accounting for 30-40% of problems. Obvious causes are salpingo-oophoritis (of gonococcal or abortal etiology), prior pelvic surgery, endometriosis, suppurative appendicitis and neoplasia.

A variety of tests for tubal status have evolved but probably the best remain the Rubin Test (for  $\text{CO}_2$  insufflation), tubal irrigation under direct observation by culdoscopy or laparoscopy, and hysterosalpingography.

In all of the categories of tubal obstruction the prognosis is poor, regardless of the form of therapy. Endometriosis is perhaps the best as 30-35% will conceive after adequate surgical and humoral therapy. Surgical reconstruction of chronically infected and obstructed tubes, even with hoods, stints, antibiotics and corticosteroids, offers only a 10% chance of conception.

### MALE FACTORS

Male causes of infertility account for some 30-40% of infertile couples. Primarily these are due to some abnormality in the ejaculate (deficient number and motility of sperm, infection),

but may also be due to faulty transmission of sperm as well as the obvious problems of impotence or premature ejaculation. The initial history and physical exam may yield useful information about primary and secondary hypogonadism, endocrinopathy, varicocele and prostatitis. The best starting point is the seminalysis on fresh ejaculates, collected by masturbation and examined immediately for sperm number, morphology and motility as well as infection. An alternate method is the Sims-Huhner (post-coital) test. If these factors are normal then one rarely has to do further studies. If these studies show deficiencies in the ejaculate then competent urologic evaluation should be obtained and include cystoscopy, testicular biopsy, chromosomal studies and general evaluation.

### FEMALE ENDOCRINOPATHY (Fig. 2)

The final group of causes of infertility are included under the heading of female endocrinopathies and include a variety of glandular and humoral problems. Of all the groups of infertility problems, these are probably the most complex, poorly understood, and confusing in ordering and evaluating the diagnostic studies required. Most revolve about defects in the ovulatory system.

Figure 2.

#### FEMALE ENDOCRINOPATHY

Thyroid: PBI,  $\text{T}_4$ ,  $\text{T}_3$  Uptake, I-131 Uptake/scan.

Adrenal: 17-OH, 17-KS, plasma testosterone, pregnanetriol. (Possible ACTH, SU 4885, Decadron testing.)

Pituitary: Skull films, visual fields, gonadotropins.

Ovarian: Progesterone withdrawal, buccal smear, vaginal cytology, endometrial biopsy, culdoscopy, laparoscopy, celiotomy, estrogen assay, vaginal cytology.

Other: BBT, menstrual calendar, cervical mucous.

*Diagnoses:* Amenorrhea ( $1^\circ$ ,  $2^\circ$ ,  $2^\circ$  with lactation); thyroid disease; hypopituitarism (partial, total); Cushing's Disease; Addison's Disease; pituitary/CNS space occupying lesions; Adrenogenital syndrome; functioning ovarian tumor; Stein-Leventhal syndrome; deficient corpus luteum, ovarian dysgenesis; chromosomal abnorms; premature ovarian failure.

Needless to say, all of the flagrant states of abnormal thyroid and adrenal function are classic in presentation, studies needed, and conventional therapy. Amenorrhea presents the specters of pituitary or CNS neoplasm and congenital anomaly. It is the subtle endocrinopathy,

the virilizing syndromes, and the chromosomal aberrations which present the most stimulating diagnostic problem: the amenorrhea problems which present the most frustrating therapeutic challenges.

The obvious place to begin evaluation of these patients is a careful history and physical examination. With these techniques one is directed toward specific areas. For example: Secondary amenorrhea, hot flashes, loss of estrogen effect all in a 20-year-old patient suggest premature ovarian failure; primary amenorrhea, classical physical findings of web neck, shield chest, lack of development of secondary sex characteristics, and cubitus valgus all suggest Turner's Syndrome.

There are also subtle clues in the more difficult problems, however, that are also of use: Short postovulatory cycles may demonstrate lack of premenstrual symptoms and an early decline in BBT suggest corpus luteum failure; significant estrogenization, associated with a pelvic mass, suggests a granulosa cell tumor.

We begin such a work up after the history and physical with a PBI, skull film, 17-OH, 17-KS, gonadotropins, visual fields, and vaginal cytology. One then must also document ovulatory status, tests essentially all based on the finding of progesterone or its metabolites. Such studies include basal body temperatures, endometrial biopsy, urinary pregnanediol, vaginal cytology, and cervical mucous changes. One then must proceed to detailed evaluation of each organ system as indicated.

**HYPOTHALAMUS — Pituitary.** Obviously, skull films and visual fields are needed as measures of end organ hormone production as reflections of tropic hormone production. More detailed studies include SU4885 testing for ACTH reserve, TSH and ACTH stimulation, pneumoencephalography, brain scans, arteriograms, and EEG's as indicated.

**THYROID.** While PBI is a useful screening test, Column T<sub>4</sub>, T<sub>3</sub> Uptake and the Murphy-Pattee thyroid studies all are also useful, as are I-131 uptake and scan with or without TSH stimulation. BMR and cholesterol are of limited use as are reflex measurements.

**ADRENAL.** Urinary 17-OH and 17-KS are useful studies but here is really where the problems arise. 17-OH are fairly good measures of cortisol production and metabolism. Certainly

plasma cortisol, decadron suppression, and ACTH stimulation all help clarify this portion of adrenal function. In patients suspected of the adrenogenital syndrome, the urinary pregnanetriol is an excellent study. It is the androgenic series which is most confusing. Urinary 17-KS have long been used for this, and will continue to be so because of ease and relative low cost, but you must remember how truly poor they are for accurate androgen measurement.

Many of the androgens vary widely on the amount produced and the biologic potency of the individual compounds. For example, Testosterone is the most important androgen by potency and etiocholanolone one of the least. In amount, however, the totals produced are reversed. One also has major problems in discussing the site of production as many androgens are extensively metabolized peripherally and then frequently are converted to potent androgenic compounds. Such techniques as plasma testosterone or androstionedione are useful, particularly when used in conjunction with adequate adrenal suppression with decadron and/or gonadal stimulation with HCG or FSH. Many of these patients will require much effort, various medications, a variety of tests, and even surgery for clarification.

**OVARIAN.** While plasma and urinary estrogens are useful, they are usually expensive and difficult to obtain. Other useful studies are endometrial biopsy, progesterone withdrawal, vaginal cytology, and cervical mucous studies. These usually are sufficient to determine estrogen presence. Progesterone and ovulatory function are evaluated as noted before. Chromosomal studies most useful are buccal smears — and only rarely are karyotypic studies or celiotomy for diagnosis needed if one considers the clinical picture and physical findings.

The obvious endocrinopathies are treated by conventional methods appropriate to the disease present. This includes thyroid replacement for hypothyroidism, I-131 or surgery for hyperthyroidism, cortisone suppression (or surgery) for excesses of adrenal function and cortisone replacement for hypoadrenalcorticism. Pituitary neoplasms are appropriately treated by surgery or irradiation and careful attention must be paid to deficient tropic hormone function after therapy. Primary gonadal failure or absence can only be treated with estrogen replacement ther-

apy and fertility is not possible. Hormonally active neoplasms are excised.

The anovulatory problems offer the newest and most exciting groups of therapeutic responses. If peripheral estrogenization is good and the patient has a responsive gonad (i.e. not dysgenetic or prematurely failed) then therapy with clomiphene citrate is capable of inducing ovulation in 70-80%. For these patients refractory to this compound, treatment with human gonadotropins offers an exciting experimental alternative.

#### COMMENT

The work up of the infertile couple requires guidance by a single physician to integrate all findings in both members of the couple. Such a physician should be versed in anatomy, physiology, endocrinology, surgery and radiology. By careful history, physical and general screening

tests, most patients can be adequately and safely evaluated. Only in 10-20% will very difficult, expensive and time consuming hormonal assays be required and then only with limited success. In over 40-50% conception can occur with minimal effort.

#### BIBLIOGRAPHY

1. Israel, S. L.: *Menstrual Disorders and Sterility*, 5th ed., Hoeber, New York, 1967.
2. Seigler, A. M.: *Hysterosalpingography*, Hoeber, New York, 1967.
3. Tyler, A. and Bishop, D. W.: "Immunologic Phenomena" in *Mechanisms Concerned with Contraception*, ed. by C. G. Hartman; MacMillan, New York, 1963.
4. Behrman, S. J. and Kistner, R. W.: *Progress in Infertility*, Little Brown, Boston, 1968.
5. Paschkis, K. E.; Rakoff, A. E.; Cantarow, A. and Rupp, J. E.: *Clinical Endocrinology*, Hoeber, New York, 1967.



#### Retreat From Patients

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The currently prevalent retreat from patients has many roots: work with patients is painful; a general tendency to undervalue clinical skills; a general failure to realize how long it takes to acquire clinical maturity; the emphasis on research for tomorrow's medicine, at the expense of service for today's needs; propaganda for service to "the community" as though this did not require the highest degree of knowledge of individual human needs; higher academic rewards (rank, status, salaries) for everything but clinical skills; the tendency of top-rank full-time professors to set a bad example by their full-time absences. Consequently, although everything to which these fugitives from patients flee is good, the results of their flight is disastrous for American medicine. In no discipline is this trend as destructive or as prevalent as in psychiatry.

#### **Chlorpropamide in Treatment of Diabetes Insipidus in Children**

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*Amer J Dis Child* 120:103-108 (Aug) 1970

In four children with vasopressin-sensitive diabetes insipidus, the hypoglycemic agent chlorpropamide caused a decrease in urinary flow rate and free water clearance without change in osmolar clearance. Only two children, however, had a satisfactory response. The effect of chlorpropamide resembles that of vasopressin injection. One child with nephrogenic diabetes insipidus showed no response. Symptoms of hypoglycemia were observed in all children. Blood glucose determinations were in the range of 53 to 75 mg/100 ml, but were found as low as 16 mg/100 ml. In two patients, intravenous glucose administration was necessary to sustain a normal blood glucose level. The risk of hypoglycemia limits greatly the use of chlorpropamide in the treatment of diabetes insipidus in children. It appears to be a more frequent and greater hazard in children than in adults.

# Developing Quality Psychiatric Programs for Arkansas

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This sequel to a previous report<sup>1</sup> supports the theses (1) that Arkansas has established an enviable national record in providing psychiatric services, (2) that marked correctable deficiencies still exist, and (3) that the most important element in past and future gains is trained manpower. With unmistakably waning federal support for training mental health personnel and probably diminishing federal support for mental health research, increased State funding of training and research is essential. Such investment in human resources to enhance human resources is financially sound and socially essential. Such monetary investment increases the gross state product in economic terms and the gross human product in socio-medical terms.

Economies in direct expense by early and effective treatment (secondary prevention) are enormous; reduction of continuing expense through rehabilitative reduction of residual defect (tertiary prevention) is significant; elimination of mental illness through primary prevention is more often wish than demonstrated fact (except for such conditions with clear etiology as

paresis), but reduction of the incidence of mental retardation by primary prevention (for example, rubella) is increasingly rewarding. Extending existing knowledge to the benefit of the total population requires more manpower working in organized private-public systems. Increasing knowledge for all levels of prevention depends upon trained and supported research manpower. No medical endeavor is more economical over time than research, yet this fact is not easily communicated to the public, especially in the present anti-intellectual climate. It may seem crass for physicians to justify services with financial arguments, but these arguments are most easily appreciated by the taxpayers. Given the financial resources, we have the means to achieve the higher ideals of the true physician.

The Arkansas public has done very well, in recent years, for their mentally ill and retarded. With astute judgment, Arkansans have selected the right leaders in many areas, including psychiatry, and these leaders have justified the confidence in full measure. (The authors are not presuming membership in the lauded category,

INDICES OF PSYCHIATRIC SERVICE, 1970				
1. Population per resident patient	Ark. Rank	Base Data Ark.	U. S.	Ark./U.S.
2. Mental hospital per diem	4	1,742	578	3.01
3. Physician hours per week per inpatient	8	\$25.37	\$14.89	1.70
4. Professional hours per week per inpatient	4	1.91	.75	2.55
5. Total personnel per inpatient	9	5.81	3.04	1.91
6. Annual per capita expenditure for mental hospitals	2	1.55	.70	2.21
7. Mental hospital expenditure as a percent of general state expenditure	41	\$ 5.29	\$ 9.31	.57
8. Rehabilitated mental illness clients as percent of total rehabilitations	27.5	1.72	2.20	.79
9. Rehabilitated mental illness clients per 100,000 population (1969)	30	20.00	22.10	.90
10. Population in CMHC catchment areas as percent of total population (1969)	10	53.30	27.50	1.95
11. Professional hours a week in mental hospitals and outpatient clinics per 1,000 population	12	45.10	30.70	1.47
	37.5	3.62	7.72	.47

TABLE 1.

ARKANSAS COMPARED TO TOTAL U. S. INDICES OF PSYCHIATRIC SERVICE, 1970  
Most of these data are based on services by state hospitals. Index 4 includes all mental health professionals in state and federal public and private institutions. Indices 8 and 9 are from federal-state vocational rehabilitation programs for 1969. Index 10 includes all CMHC's regardless of sponsorship. Index 11 does not include VA.

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though we aspire to become worthy of the accolade.)

### National Standing

Of "Eleven Indices"<sup>2</sup> of psychiatric service (1970), Arkansas averages #16.8 and is above the U. S. average in seven as summarized in Table 1. This accomplishment is highlighted by the fact that Arkansas ranks below the national average in four indices of financial support: (1) annual per capita expenditure for mental hospitals, (2) mental hospital expenditure as a percentage of general state expenditure, (3) professional hours per capita per week in mental hospitals and outpatient clinics, and (4) rehabilitated mental illness clients as a percentage of total rehabilitations. Omitting these expenditure indices the average rank for the remaining seven is #7. The table, based on "Eleven Indices"<sup>2</sup> provides more detail. The ratio column, for example, shows that each Arkansas State Hospital bed serves three times as many residents than the U. S. average.

Thus Arkansas is remarkably effective in gaining maximum return from its psychiatric dollar. Ranking #4 in per capita expenditure for mental hospitals and #27.5 in proportion to the expended state dollar (FN 4), Arkansas is #4 in the number of total population served by each bed. This latter rank suggests either that Arkansas fails to provide sufficient beds or else provides better alternatives to hospital admission or extended stay. The latter explanation is supported by the fact that Arkansas is #12 in the percentage of population served by community mental health centers (CMHC). Note, however, that index 11 in combination with indices 3, 4 and 5 (table) indicate that much of the CMHC coverage is sparse. Other data, not reported here, attest to the fact that Arkansas provides excellent quality and quantity of care for psychiatric inpatients but has far to go in "fleshing out" existing community programs and in establishing others. As in other states, Arkansas has much to add for children, elderly, and addicts to alcohol and other drugs. With a bedrock State Hospital budget the necessary additional services require new money.

Arkansas, ranking #8, spends 70 percent more per diem for mental hospital beds than the U. S. average. Undoubtedly much of this cost is for personnel, who are not handsomely paid by na-

tional standards. Although ranking #49 in per capita income \$2,791 (U. S. \$3,921), Arkansas achieves a very high rank in mental health economy. The probability is high that Arkansas achieves considerable economy by spending 170 percent per diem of the national average. If the State provided beds at the higher average number and at the lower average cost, the annual tab would be \$18 million rather than the current \$10 million. If Arkansas hospitalized at the New York rate (one bed per 271 population) and at the New York per diem (\$13.46) we would be spending more than \$100 million per year. Our *total* state expenditures for the year 1970-71 was \$240 million. (FN 5) The \$8 million saving over the national average would hire about 300 more psychiatrists or over 3½ times the present number of all psychiatrists in the state (92 in active practice in 1972). In order to reach the national per capita average, we need to exactly double the number of Arkansas psychiatrists.<sup>3</sup>

Arkansas appropriates virtually nothing for mental health research. The federal government and private foundations do not fill this void. Based on calculations from federal reports, Arkansas, with almost one percent of the U. S. population received in 1970 through the National Institute of Mental Health about one percent of service funds, about 0.8 percent of training funds, but only 0.3 percent of research funds. Producing about one percent of the graduates of U. S. medical schools, Arkansas has 0.4 percent of the nation's psychiatrists. (The Nixon administration proposes, myopically, to eliminate *all* mental health training funds effective July 1, 1973.) When a cure for schizophrenia is discovered, the need for psychiatric beds will be halved. Allotment of even *one* percent of the State mental health funds for research would support a significant research thrust. With odds of 1:50 Arkansas should place its bet.

### Progress in Arkansas

Prior to 1955 the number of patients confined in U. S. mental hospitals had been increasing by one to two percent annually for many years; Arkansas was no exception. In 1955, when the hospitalized population had reached a summit of 559,000 there was a historical turning point. Since then, despite increasing U. S. population, the patient population has decreased in every succeeding year to 339,000 in 1970.<sup>4</sup>

At the time of the 1955 Crawfis-Blain survey<sup>5</sup>

## DEVELOPING QUALITY PSYCHIATRIC PROGRAMS FOR ARKANSAS

of "Mental Health Resources of Arkansas", Arkansas had 6,000 patients in State Hospital beds. On July 1, 1970 Arkansas had 1,010 inpatients in the State Hospital, including the adult retarded. Thus while the U. S. reduced its beds to 60 percent of the 1955 figure, Arkansas reduced to *less than 20 percent!* The 1955 report predicted that "if Arkansas' trend toward urbanization follows the national pattern [which it did] eventually the state may be expected to need near 10,000 beds, even with a population stabilized at the present figure [1,909,511 in 1950 and 1,923,295 in 1970]." (FN 6)

Multiple factors were involved in this spectacular reduction of beds. Many patients were shifted to more appropriate facilities such as vocational rehabilitation units and nursing homes. In addition there was a very significant drop in the beds for more strictly psychiatric patients through a combination of the use of modern treatment facilities, newer drugs (particularly phenothiazines for schizophrenics) and improved person-to-person treatments incident to improved personnel to patient ratios, and more and better trained personnel, particularly psychiatrists. The impact of the Department of Psychiatry of the University of Arkansas Medical Center became noticeable and important partially because of its direct service to outpatients and inpatients but more through its augmentation of psychiatric training. This Department was established in 1948 and its Chairman was appointed in 1951. More recently the development of community mental health centers and clinics has had an increasingly salutary effect.

The Child Study Center of the Department of Psychiatry initiated the first major thrust in the State for child psychiatric services. This unit, with its multiple services now including inpatient and day care treatment, constitutes the child component of the Greater Little Rock Community Mental Health Center. The adult component, located on the grounds of the Little Rock division of the Arkansas State Hospital (ASH), is administered by the ASH. Both components provide services for adolescents. The new Jonesboro regional complex containing the George W. Jackson Mental Health Center has major potential for mental health and other services, including those for children (FN 7).

Undoubtedly the development of psychiatric units at the Baptist Medical Center and at St. Vincent Infirmary, which became possible with

the increase of the private practitioner pool, has reduced demands on the State system while enhancing the quality of care particularly in central Arkansas.

The data presented concern the state-financed programs, but it should be noted that the VA Hospital, North Little Rock Division (VANLR), with three-fourths of its patients from Arkansas, has made progress parallel to that of the ASH and the UAMC. In fact in the late '40s and the early '50s Fort Roots was the pacesetter. Through gradual loss of psychiatrists Fort Roots began a gradual decline in the early '60s followed by a striking up-turn during the past few years. It should be noted that both the ASH and VANLR have been recipients of many national awards for excellence over the past three decades. In terms of inpatient statistics, VANLR had 1400 psychiatric beds in 1955, 900 in 1970 and 800 in 1972. These figures do not include the psychiatric-medical infirm who are assigned to Medicine Service.

### **Coordination and Integration of Services**

As the Veterans Administration becomes decreasingly constricted by regulation and law, their community services increase. If the trends toward increasing eligibility for VA services continue, the psychiatric services offered by the State and the VA must become increasingly coordinated in the interest of efficiency and effectiveness. Since the sensible "unit" is usually the family, it makes little sense for only one member of a family to be eligible for services.

Proper delivery of psychiatric care requires the combined resources of local, state and federal governments with the private sector. Too great a shift toward the public sector would very likely lead to increasing bureaucratization at the ultimate expense of the patients and the public. This danger is increased by all-too-common tendencies to omit psychiatry in comprehensive planning, in insurance coverage and in comprehensive delivery through HMO's or other arrangements. Too often we hear the illogical construct "comprehensive health *and* mental health." The *and* must be replaced by *including*.

### **Unmet Needs**

We shall briefly enumerate, without explication, obvious unmet needs:

1. More services for people at both age extremes.
2. More and better services (primary, second-

ary and tertiary) for those who may or do abuse themselves through alcohol and other drugs.

3. More and better services for the pre-delinquent, delinquent and adult offender.

4. Improved geographic and socio-economic distribution of services.

5. A solid financial base for mental health training and research.

The most crucial factor in quality treatment of the mentally ill is the quantity and quality of manpower over the full spectrum from nursing assistant to hospital or program director. Certainly the quality of leadership is crucial.<sup>6</sup>

We shall deal in the next section with the development of psychiatrists, in no sense minimizing the importance of nurses and their assistants, social workers, psychologists and other professionals and non-professionals. We leave to others the task of accumulating and presenting the manpower data for their own fields.

Nor do we speak to the manpower needs for medical specialties other than psychiatry, although many of the other specialists provide extensive service for the mentally ill and retarded and for patients compromised by alcohol and other drugs. We challenge physicians from other specialties to publish the manpower data from their own specialties. The need for more general and family practitioners is painfully evident, but we must all challenge the simplistic notion that this goal should be reached by a reduction in production rate of other short-handed specialties such as pediatrics, neurology, internal medicine and public health. Certainly family practition-

ers need and desire supporting and accessible assistance from other specialists. Therefore, the valid question is: how can we get the desirable number and distribution of family practitioners and other specialists?

### **Production and Distribution of Arkansas Psychiatrists and Arkansas-Trained Psychiatrists**

Two-thirds of the Arkansas psychiatrists who are still actively practicing were trained in Arkansas and two-thirds of the psychiatrists trained in Arkansas are in full-time public service here or elsewhere. Three-fourths of the active psychiatrists in Arkansas are in full-time public service. Although two-thirds of Arkansas psychiatrists are in central Pulaski County, more than half of these work in institutions which serve the entire state and beyond. These data are tabulated in the next two tables.

Arkansas has almost 4.8 psychiatrists per 100,000 population, or about half the national average<sup>3</sup>; progress in improving the ratio is slow. From 1968 to 1972, Arkansas had a net gain of 11 psychiatrists or about 2.5 per year. On the average we have "produced", since 1958, about four new psychiatrists per year and have "traded" one of these to another state, which means an average loss through death or retirement of about 1.5 psychiatrists per year. The retirement rate is accelerating as might have been predicted in 1968 when the median age of Arkansas psychiatrists was 48.8.<sup>3</sup> During 1971 three psychiatrists

As of May 1, 1972

	Psychiatrists practicing in Ark.		Practicing psychiatrists trained in Ark. 1958-72			
	No.	%	In Ark.	Other states	Total	
<i>Public Service</i>						
State Hospitals	30.5	33.2	17.0	5.0	22.0	25.9
VA Hospitals	17.5	19.0	6.5	4.0	10.5	12.4
MH Centers or Clinics	10.0	10.9	11.5	5.0	16.5	19.4
Academic (UAMC)	7.5	8.2	3.5	—	3.5	4.1
Other public	3.0	3.3	2.0	1.0	3.0	3.5
Subtotal	68.5	74.6	40.5	15.0	55.5	65.3
<i>Private Practice</i>	23.5	25.4	14.5	15.0	29.5	34.7
TOTAL	92.0	100.0	55.0	30.0	85.0	100.0

TABLE 2. DISTRIBUTION OF ARKANSAS PSYCHIATRISTS BY LOCUS

The first two number columns account for all practicing psychiatrists in Arkansas. The last four columns account for practicing psychiatrists trained in Arkansas since 1958. Seven other active Arkansas psychiatrists were trained here prior to 1958.

	1968	1972
Central Metropolis		
Little Rock, North Little Rock	65	66
Central Arkansas (other)		
Benton, Hot Springs,		
Malvern, Pine Bluff	10	14
East Arkansas		
Helena, Jonesboro	0	4
South Arkansas (excluding Texarkana)		
El Dorado	1	1
West Arkansas		
Fayetteville, Fort Smith	5	7

TABLE 3.

**GEOGRAPHICAL DISTRIBUTION OF  
ARKANSAS PSYCHIATRISTS**

The offices of the three psychiatrists in Texarkana are on the Texas side.

retired and two others died. In the manpower race we are running hard to stay even.

In Table 3 note the recent trend toward dispersion of psychiatrists. The increase in East Arkansas, all from our own training programs, is associated with the new Jonesboro complex and with new clinics.

Of the 80 psychiatrists in the five counties of Central Arkansas which contain 33.7 percent of the State population, 55 were in institutions predominantly serving the entire State. The VA serves portions of each of the surrounding states which provide one-fourth of the VA inpatient population. Omitting the psychiatrists with state-wide or larger catchment areas, the remaining 25, or 25.6 percent of the State total, were geographically accessible to 33.7 percent of the State population. Consider also that several Central Arkansas psychiatrists consult to clinics throughout the State. Although our catchment area figures are imprecise, it appears that Arkansas psychiatrists are distributed with relative equity, and that the considerable unmet patient needs are distributed relatively equitably. We lack the manpower data for mental health professionals other than psychiatrists, but assume that they are approximately proportionate.

Having noted considerable dependence on our residency programs for Arkansas psychiatrists, let us take a closer look at the "products" and at the "production machinery." We shall look at the output in quantitative terms and leave it to our patients, our former residents and our other medical colleagues to assess the quality.

In order to "produce" 85 practicing psychiatrists from Arkansas residencies between 1958-72, we accepted 115, 19 of whom are currently in training (5/1/72). Seven residents failed to complete the residency and four have died since completion. Of the 85 net, 37 were residents in the ASH residency program, 24 in the VA program and 24 in the UAMC program. During the training period, the VA and ASH residents were assigned on the average to UAMC for affiliate training for about one-third time and the UAMC residents were assigned about one-sixth time to either VA or ASH. In terms of locus of training, therefore, the training distribution by resident equivalents was as follows: UAMC - 40; ASH - 27; VA - 18. Nearly half of the resident training has been at UAMC and partially, but significantly, supported by the National Institute of Mental Health.

Combined with other funds, an NIMH training grant first awarded to UAMC for the period beginning July 1, 1958 and since renewed through June 30, 1973: (1) enabled the establishment of a fully approved three-year psychiatry residency at UAMC; (2) made possible the reactivation of the now excellent but then tottering ASH residency; and (3) permitted the continuation of an excellent VANLR residency without the necessity of continuing to send residents to St. Louis for supplemental training. The two local VA hospitals later united as the VA Consolidated Hospital, Little Rock (VALR). For psychiatry residency training it became possible and desirable for the VA to affiliate in 1958 and to integrate in 1970 with UAMC. The VA obligated career program retains affiliate status for technical reasons. The ASH program continues to affiliate with both UAMC and VALR (FN 8).

Residents of the current UAMC-VA integrated residency are assigned to and supported by the VA for one of three years. The VA career residents and the ASH residents are assigned to UAMC for one of three years, but receive stipends for the total period from their home base. Stipends account for approximately one-half of the cost of training.

In financial terms, the University program for residency training in psychiatry has been supported approximately equally by federal funds, state funds and, indirectly, by patient fees. NIMH has provided a major and essential por-

tion. As a matter of policy, supported by specious argument, the Nixon administration opposes categorical support for the training of mental health professionals, including psychiatrists. Congress, however, has consistently provided funds for this purpose despite threats of impoundment by the federal Office of Management and Budget. At this writing we are told by NIMH staff, responsible to the Executive branch, not to expect such funds beyond June 30, 1973. If this policy prevails, it is essential that the State fill the void particularly for the support of the UAMC residency which is financially much more vulnerable than the other two Arkansas residencies. Accreditation of these other Arkansas programs depends upon their linkages with the UAMC program. If the link is broken all of our residencies fall.

### Summary

We have presented a brief but hopefully informative account of mental health programs, psychiatric training and psychiatric manpower in Arkansas and their close interrelationship. We have indicated the relative excellence of Arkansas programs when compared nationally, and the considerable deficiencies when compared to the need for psychiatric services locally. The gains attained and to be attained depend upon the support of the public in general and the physicians of Arkansas in particular. We hope that the reader has become better informed through this communication, and therefore more effectively supporting of continuing improvement in psychiatric services. We hope that this report will encourage physicians of other specialties, certainly including general practice, to publish similar data for their specialties.

### REFERENCES

1. Reese, W. G.: Evasion of Responsibility by Physicians in Planning Health Services. *J. Ark. Med. Soc.*, 67:155 (Oct.) 1970.
2. Kanno, C. K. (Ed.): *Eleven Indices*, Washington, The Joint Information Service of the American Psychiatric

Association and the National Association for Mental Health, 1971.

3. The Nation's Psychiatrists, Chevy Chase, NIMH, Public Health Service Publication No. 1885, 1969.
4. Stunkard, A.: Testimony before a congressional committee, June 8, 1971, Washington, D.C.
5. Crawfis, E. H. and Blain, D. (Ed.): *Mental Health Needs and Resources of Arkansas*. Mimeographed Committee Report to the Governor, Jan. 17, 1955.
6. Reese, W. G.: An Essay on Administration, *Amer. J. Psychiat.*, 128:1251 (April) 1972.

### FOOTNOTES

1. Submitted May, 1972. The authors acknowledge the assistance of Henry L. Lambert, M.D., George W. Jackson, M.D., and Richard R. Nolen, M.D. in providing essential data.
2. Professor and Chairman, Department of Psychiatry, University of Arkansas Medical Center, 4301 W. Markham, Little Rock 72201.
3. Associate Professor of Psychiatry and Director, Psychiatry Residency Program, University of Arkansas Medical Center.
4. This statistic is questionable. In the fiscal year 1970-71 Arkansas spent a total of almost \$240 million of State revenue including \$9.5 million (or 3.97 percent) for the Arkansas State Hospital.
5. According to the Budget Division, Arkansas Department of Administration.
6. We are indebted to Dr. Forrest H. Pollard for the census figures which he obtained from the U. S. Bureau of Census.
7. The ASH answers to the State Hospital Board and to the Director of Social and Rehabilitative Services. The major components of the Arkansas Mental Health Services are the hospitals at Little Rock and Benton, the center at Jonesboro, and the developing component designated Community Mental Health Services. Some mental health centers and clinics operate under local boards independent of the State system.
8. The ASH program was directed by Hans B. Molholm from 1958-68 and since then by Richard R. Nolen. The VA program was directed by Henry L. Lambert from 1961-71 and since then by R. Harvel Harrison. The UAMC program was directed by William G. Reese from 1958-70 (except for two interspersed years when John E. Peters performed this function) and since 1970 by Robert F. Shannon.



# Appendicitis

## How the Radiologist Can Help in Making the Diagnosis\*\*

J. T. Ling, M.D.\*

In the majority of cases the well recognized and rather typical clinical course of acute appendicitis permits a definite early diagnosis without any special procedures. There are, however, a significant number of cases with a quite atypical clinical features, particularly in the very young<sup>1</sup> and in the aged,<sup>2</sup> where every available diagnostic assistance is needed. Furthermore, the incidence of ruptured appendix is significantly higher in the pediatric and geriatric group.

A fuller awareness of the role of the roentgen modality in the diagnosis of inflammatory disorders of the appendix will produce a significant high yield. We have found it a wise and productive policy to examine all patients roentgenographically for suspected appendiceal diseases. Frimann-Dahl<sup>3</sup> states that positive roentgen findings have appeared in about fifty per cent of two thousand cases examined.

### MATERIAL AND METHODS

Two hundred and fourteen cases (Table I) of appendicitis in five years comprises the pathological material for this study. In ninety per cent of these cases, adequate abdominal roent-

Table I  
*Acute Appendicitis*

No. of Cases	214
Roentgenograms available	180
Abnormal gas pattern	40
Appendiceal enteroliths	25
Uncontained peritoneal gas	20
Gas in appendix	9
Peri-appendiceal abscess	5
Right flank fluid collection	2
Obscurcation of right psoas	4
Scoliosis of lumbar spine	4
Obliteration of right flank strip	8

genograms were available. This was studied for the presence or absence of ileus, appendicoliths, free air, gas in appendix and other striking findings were also noted.

### ROENTGEN SIGNS

**Abnormal Gas Pattern:** The possibility of observing roentgen changes is a function of the

position of the appendix as well as of the extent of inflammatory process; of prime importance here is whether or not the inflammatory process extends through all walls of the appendix and whether or not contiguous structures are involved.

The observable changes may vary from regional ileus involving the terminal ileum and the cecum to generalized adynamic ileus or mechanical small bowel obstruction (Fig. 1). The



Fig. 1.

An upright roentgenogram of the abdomen demonstrates mechanical small bowel obstruction in a patient with non-perforative gangrenous appendix.

cecum is almost always slightly to moderately dilated with a prominent haustration and thickened wall. When a fluid level is demonstrated<sup>3</sup> and other causes are excluded, it justifies a diagnosis of acute appendicitis even when the clinical findings are vague and inconclusive. Changes similar to those in the cecum are also present in the terminal ileum.

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\*\*Presented at the Annual Meeting of the Arkansas Medical Society, April 23-26, 1972, Hot Springs, Arkansas.



Fig. 2.

A supine roentgenogram of the abdomen shows subhepatic air (black arrow) and gas-containing retrocecal appendix (open arrows) with tip of the appendix at the level of the eleventh rib.

**Uncontained Peritoneal Gas:** In perforative appendicitis, a localized or distant collection of gas and/or gas containing abscess may be demonstrated (Fig. 2, 3). Its location depends on the anatomic position of the appendix, and it is usually detected by the presence of small flocculant gas shadows.

Pneumoperitoneum in acute appendicitis is a rare phenomenon.<sup>4-6</sup> Frimann-Dahl has not observed pneumoperitoneum in a series of over two thousand cases. McCort<sup>7</sup> in the review of six hundred and forty-eight appendectomies, of which one hundred and three show perforation, found only six cases which demonstrated free air on roentgen examination.

Steinert et al<sup>10</sup> have reported on a single case with pneumoperitoneum due to basal perforation in a series of ninety-eight cases. They saw no case of subdiaphragmatic air. The rarity of pneumoperitoneum could be explained by the



Fig. 3.

An upright abdominal roentgenogram reveals a large gas-and-fluid-containing pelvic abscess in a patient found to have a ruptured appendix.

following: (1) perforation occurred distal to the impacted fecolith, (2) lumen occluded by inflammation, (3) retrocecal position of the appendix, and (4) presence of fibrinous adhesions.

**Appendiceal Enterolith:** The appendicoliths are usually radiologically demonstrable depending on size and degree of calcification. The nucleus of the calculus is often inspissated fecal material although it may occasionally be represented by a foreign body. They are frequently laminated and demonstrable in about ten per cent of patients with acute appendicitis. They are multiple in about one-third of cases encountered.<sup>8</sup> (Fig. 4, 5) Faegenburg's<sup>9</sup> study of one hundred cases of acute appendicitis confirms the fact that calculi were visible in about twelve per cent of these patients.

The presence of fecolith in a case of appendicitis increases the likelihood of complications more than threefold. Felson and Bernhard<sup>1</sup> and Shaw<sup>9</sup> point out that in approximately fifty per cent of such patients the appendix is actually perforated.

**Gas in Appendix:** The presence of gas (Fig. 6) in the appendix as a sign of acute appendicitis was first described by Musgrave<sup>11</sup> in 1952.

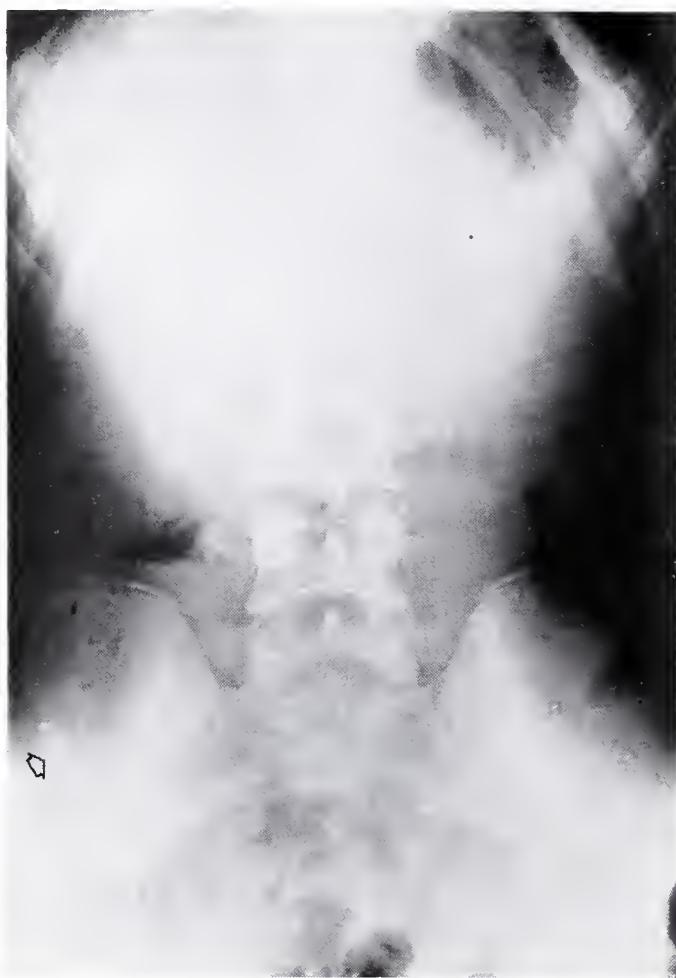


Fig. 4.

An upright abdominal roentgenogram in a patient with non-perforative acute appendicitis demonstrates several appendicoliths overlying the iliac bone.

Killen and Brooks<sup>12</sup> revealed the literature in 1965 and reported this finding as indicative of acute appendicitis in 1.9 per cent of eight hundred and twenty-three patients — a figure arrived at by combining his figure with those of Faegenburg. The sign is not pathognomonic. Samuel<sup>13</sup> and we have observed this finding in normal individuals. Fisher<sup>14</sup> described a dilated fixed gas-filled appendix with a fluid level as a sign of gangrenous non-suppurative appendix.

**Mass Density in Right Lower Quadrant:** Its occurrence usually indicates perforation and abscess formation. Sometimes, fluid in terminal ileum and cecum may also present a soft tissue density. Occasionally, such a finding can occur without perforation but with secondary omental edema.

**Fluid in Right Flank:** A localized fluid collection in the right lower quadrant interposed between the colonic content and the lucent flank stripe produces a smooth, fairly well defined margin against the extraperitoneal fat in the

flank. Medially the fluid density merges with the bowel wall giving irregular and often lobular appearance against the fecal or gas shadows in the colon. The appearance is similar to that seen in both flanks in patients with ascites. A displacement of more than five millimeters, anywhere along the right flank stripe, is considered significant. Casper<sup>15</sup> demonstrated the roentgen sign of interposed fluid density in fifteen out of twenty-eight patients with acute appendicitis. At surgery nine of these cases had gangrenous appendices with perforation, and two had gangrenous appendices without perforation.

**Other Evidence:** The psoas muscle sign consists of spasm of the right psoas muscle and indistinct delineation of its distal third. As a result of spasm, scoliosis of the lumbar spine is produced with the concavity toward the right. Blurring of the psoas muscle shadow is due to localized edema in the posterior wall. This sign is usually present in cases where the appendix is retroperitoneal. One observes obliteration of the flank stripe only when the appendix is retrocecal



Fig. 5.

Specimen roentgenogram shows six typical oval-shaped laminated appendiceal calculi.

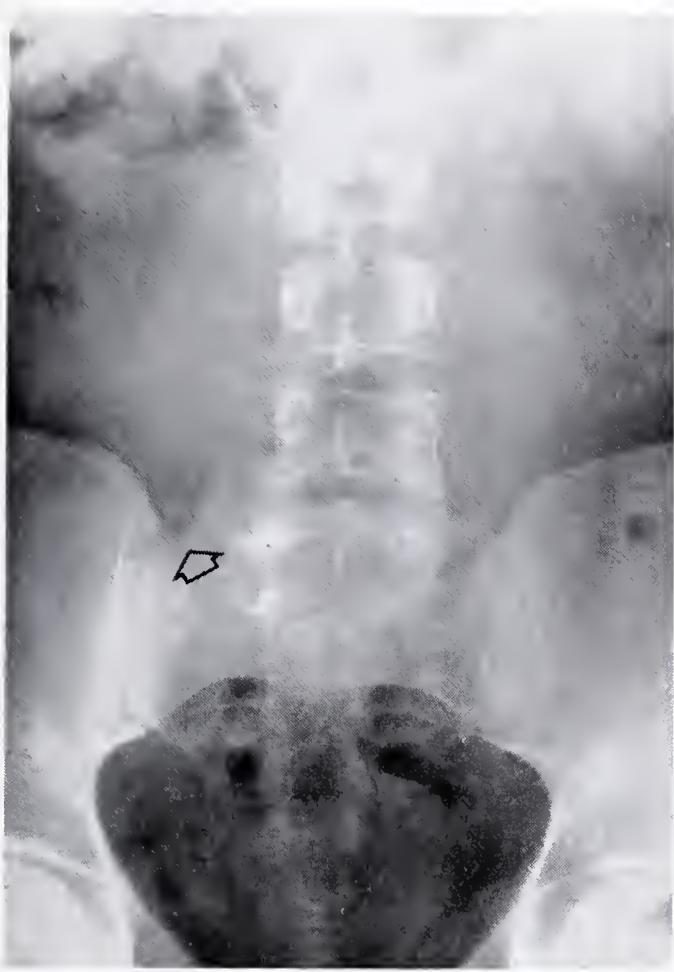


Fig. 6.

A supine roentgenogram of the abdomen in a symptomatic patient shows a gas-filled appendix.

and laterally placed and when the inflammatory reaction extends directly to the flank.

### SUMMARY

The findings on the plain roentgenograms of the abdomen in acute non-calculous and calculous inflammatory states of the appendix are presented and illustrated.

The importance of the role of the radiologist in the diagnosis of the diseases of the appendix, particularly in the inflammatory state, is stressed.

### REFERENCES

- Wilkinson, R. H., Bartlett, R. H. and Eraklis, A. J.: Diagnosis of Appendicitis in Infancy: The Value of Abdominal Radiographs. *Am. J. Dis. Child.* 118:687-690, 1969.
- Thorbjarnarson, B. and Loehr, W. J.: Acute Appendicitis in Patients Over the Age of Sixty. *Surg. Gynec. and Obst.* 125:1277-1280, 1967.
- Frimann-Dahl, J.: Roentgen Examination in Acute Abdominal Diseases. Charles C. Thomas, Publisher, Springfield, Ill., 1966.
- Greenberg, B. E.: Spontaneous Pneumoperitoneum in Appendicitis. *Proctology* 77:248, 1961.
- Soteropoulos, C. and Gilmore, J. H.: Roentgen Diagnosis of Acute Appendicitis. *Radiology* 71:246-256, 1958.
- Steinert, R., Hareide, I. and Christiansen, T.: Roentgenologic Examination of Acute Appendicitis. *ACTA Radiol.* 24:13-37, 1943.
- McCort, J. J.: Extra-alimentary Gas in Perforated Appendicitis: Report of Six Cases. *Am. J. Med.* 84:1087-1092, 1960.
- Felson, B. and Bernhard, C. M.: Roentgenologic Diagnosis of Appendiceal Calculi. *Radiology* 49:178-191, 1947.
- Faegenburg, D.: Fecaliths of Appendix: Incidence and Significance. *Am. J. Roentgenol.* 89:752-759, 1963.
- Shaw, R. E.: Appendix Calculi and Acute Appendicitis. *Brit. J. Surg.* 52:451, 1965.
- Musgrave, J. E.: Unusual Roentgenographic Findings in Gangrenous Appendicitis. *Canad. M. A. J.* 67:666-667, 1952.
- Killen, D. A. and Brooks, W. E., Jr.: Gas Filled Appendix: Roentgenographic Sign of Acute Appendicitis. *Ann. Surg.* 161:474-478, 1965.
- Samuel, E.: The Gas Filled Appendix. *Brit. J. Radiol.* 30:27-39, 1957.
- Fisher, M. S.: A Roentgen Sign of Gangrenous Appendicitis. *Am. J. Roentgenol.* 81:637-639, 1959.
- Casper, R. B.: Fluid in the Right Flank as a Roentgenographic Sign of Acute Appendicitis. *Am. J. Roentgenol.* 110:352-354, 1970.



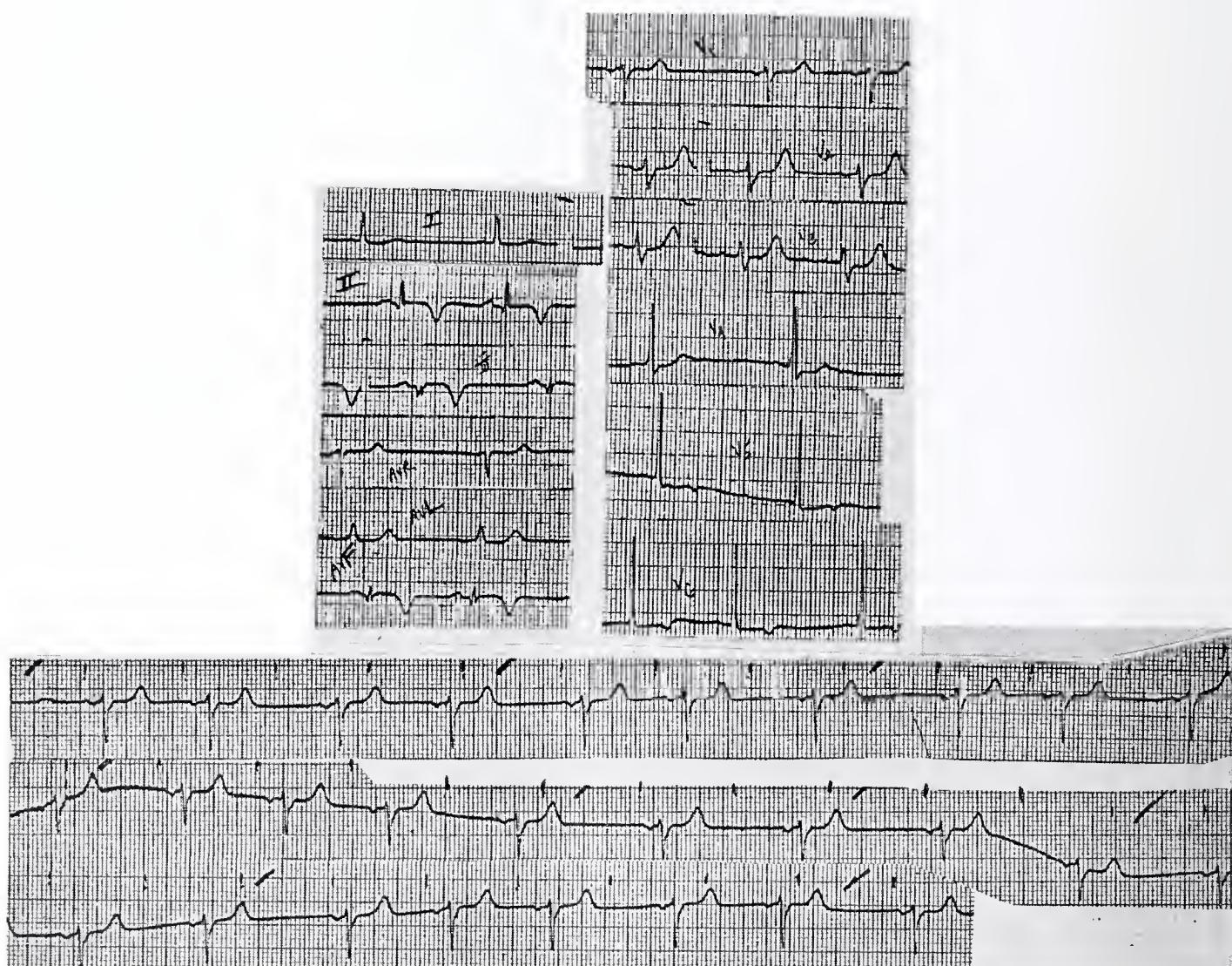
# ELECTROCARDIOGRAM

# OF THE MONTH



The Department of Cardiology, University of Arkansas Medical Center

See Answer on Page 245



76 year old white male with bradycardia.

John E. Douglas, M.D., Assistant Professor of Medicine and Physiology

University of Arkansas Medical Center

4301 West Markham

Little Rock, Arkansas 72205



## Influenza, New Strains for '72

G. Doty Murphy, M.D. and Stephen K. Felts, M.D.\*

For the past several years most of our epidemic influenza has been due to influenza viruses antigenically similar to the A2 Hong Kong strain. Most of our adult population now has some antibody against these strains. However, according to a recent announcement of the Public Health Service Advisor Committee of Immunization Practices "moderately distinctive, but not altogether new, strains of type A influenza viruses" have caused outbreaks of illness in Southeast Asia, Australia, the Far East, and Hawaii. The new prototype strain is A/England/42/72 (H3N2).

The committee further states that it is reasonable to expect that these new strains will be the cause of influenza cases in the United States during the 1972-73 season. "However, it can not now be determined whether widespread outbreaks are likely to occur. This is partly because a majority of our population already has some immunity from prior exposure to related influenza viruses.

"Based on laboratory information, currently available influenza vaccine should offer some protection against the newer strain." For this reason the Committee is still strongly recommending the administration of the currently available influenza vaccine to high risk groups of individuals as before.

Cases of influenza due to these new strains of virus can be expected to be typical of influenza with symptoms of fever, malaise, coryza, cough, myalgia, headache, and few if any gastrointestinal complaints.

Influenza-like illness may be caused by several other families of viruses including the adenoviruses, coxsackie viruses and ECHO viruses. Thus an accurate diagnosis of influenza-like illness requires laboratory confirmation.

Early in the illness the virus may be cultured from throat swabs. Such specimens must be immediately frozen and mailed in dry ice ( $-70^{\circ}\text{C}$ ), greatly limiting the availability of this technique.

However, serologic specimens are fairly easy to obtain and provide a diagnostic aid available to any physician. The initial serum specimen, obtained during the patient's acute illness, should be frozen until the convalescent specimen is obtained two to four weeks later. Then both specimens may be mailed (refrigeration during mailing not necessary) accompanied by a completed CDC form HSM 3.023 (available from the State Laboratory) to the Arkansas State Department of Health, Bureau of Laboratories, 4815 W. Markham, Little Rock, Arkansas 72201. If the CDC form is not available the following information must accompany the samples: Patient's name, age, summary of pertinent history including *date of onset*, clinical diagnosis, and indication of any similar cases in family or community. Serum sample tubes should be labeled with the date obtained.

In spite of the apparent antigenic change in some influenza viruses, the currently available vaccine will probably afford significant protection. Those persons at greatest risk of influenza related mortality should have priority in receiving influenza vaccine. This includes persons of any age with chronic debilitating conditions, congenital and rheumatic heart disease, chronic bronchopulmonary diseases, diabetes mellitus and other chronic metabolic disorders. Persons with mitral stenosis and congestive heart failure seem to be particularly prone to severe complications of influenza. These and other "high risk" patients should receive annual immunization as a routine procedure regardless of the amount of influenza expected in any specific geographic area.

\*Arkansas State Health Department, 4815 West Markham, Little Rock, Arkansas 72205.



## EDITORIAL

### Gastrin

Alfred Kahn, Jr., M.D.

The hormone gastrin is present in the pyloric mucosa. Its discovery was credited to Edkins in 1905, who reported that extracts of the pyloric mucosa of cats contained an extractable substance which when injected into another animal caused gastric secretion. The name gastrin was first used by Edkins. Gastrin is now known to be a very potent secretagogue of hydro-chloric acid by the gastric mucosa. Whereas gastrin used to be crudely assayed by its biologic effects, recent studies have defined gastrin so that it can be studied quite precisely.

Sanders and Schimmell ("American Journal of Medicine," Vol. 49, p. 380, Sept. 1970) have extensively reviewed gastrin. They have discussed the isolation and purification of gastrin which is a polypeptide. This polypeptide is really a tetrapeptide. There are two forms of gastrin: gastrin I and gastrin II. Analogues have been made which demonstrated that the activity can be altered by changes in seven important areas. The relationship between the vagus nerve and gastrin experiments have not been conclusive. It has been shown in most experimental models that vagus stimulation was a major portion of the stimulus to release gastrin. Furthermore, it has been shown that there is a synergism between gastrin and the vagus nerve in their stimulatory effect on the parietal cells — causing the release of hydrochloric acid. These studies of gastrin have led to the finding that there is a dose-response relationship. These findings enabled appropriate studies of a synthetic gastrin preparation called pentagastrin, which has proved to have reliable, reproducible results and which will probably replace gastrin in testing. Studies in humans have shown that gastrin is a more potent stimulator of hydrochloric acid than Histamine; some aspects of these studies indicate that the site of histamine action is not the same

as gastrin. Gastrin over-secretion is controlled in health by a feedback mechanism — it is autoregulating. Some substances have been shown to modify gastrin's effect; Reserpine increases gastrin secretion if the vagus nerve is intact; in gastric fistulas, Reserpine decreases gastrin activity. Glucacon reduced gastrin effect whether the vagus was intact or not. The site of action of gastrin is not proved; it may stimulate the nerves of the stomach to release acetyl choline, since atropine may inhibit the release in certain preparations; gastrin works directly on smooth muscle. Reasoning by analogy, probably gastrin can effect the release of hydrochloric acid by direct and indirect means. Gastrin II increases the flow of bile but is less effective than secretin. Human muscle taken from the stomach produces a response when treated with gastrin, but muscle from the jejunum and ileum does not. Gastrin may be present in abnormally large amounts; this is the case in Zollinger-Ellison Syndrome.

A convenient, fairly easy method of determining gastrin is by using radioimmunoassay. Ganguli, Cullen, and Irvine ("Lancet," Vol. I, p. 155, January 23, 1971) have performed assays of plasma gastrin in pernicious anemia, achlorhydria without pernicious anemia, hypochlorhydria, and controls. They found an elevated plasma gastrin in a high percentage of patients with pernicious anemia, achlorhydria with adequate B-12 absorption, and hypochlorhydria. The levels of gastrin in a few cases were high enough to overlap the level of patients with Zollinger-Ellison Syndrome. The authors caution that although the clinical use of serum or plasma gastrin is of value in Zollinger-Ellison Syndrome, it is not a precise indicator of achlorhydria.

Trudeau and McGuigan ("Gastro-Enterology," Vol. 59, p. 6, July, 1970) measured the plasma gastrin levels by radioimmuneassay in 67 patients

with peptic disease and compared their levels to a group of controls. Their results indicated no significant elevation of the gastrin level of patients with peptic disease over a group of controls. The control group showed a progressive elevation of the gastrin level with increasing age. The normal gastrin levels of ordinary peptic disease patients contrasts with the elevated levels in Zollinger-Ellison disease.

The amount of gastrin in the thoracic duct has been measured after stimulation of gastrin release; this has been compared to the gastrin levels in the hepatic vein blood and in the peripheral circulation (McGuigan, Jaffe, and Newton, "Gastro-Enterology", Vol. 59, p. 499, October, 1970). After acetyl choline stimulation of the stomach, gastrin was found to be elevated in both the portal and peripheral blood. Gastrin was increased in the thoracic lymph after stimu-

lation of the stomach, but the amounts present in the lymph were substantially less than in portal blood. It is of interest that only modest amounts of gastrin were found to be extracted by the liver, as determined by the hepatic and portal vein assays.

"The Effect of Atropine on Plasma Gastrin Response to Feeding" was the topic of a report by Walsh, Yalow, and Berson ("Gastro-Enterology," Vol. 60, p. 16, January, 1971). They found that "atropine fails to inhibit the gastrin-secretory response to a test meal in man, and, indeed, significantly enhances the response in some subjects." This response is the opposite to what one might expect.

The study of gastrin has illuminated not alone the field of normal gastric physiology, but it has also helped our understanding of abnormal gastric physiology.



### Osteomalacia With Long-Term Anticonvulsant Therapy in Epilepsy

C. E. Dent et al (77 Eaton Rise, Ealing, London)

*Brit Med J* 4:69-72 (Oct 10) 1970

Investigation and treatment of osteomalacia and described in four patients with epilepsy receiving long-term anticonvulsant therapy. The shortest period of treatment was 16 years. All patients were consuming diets containing adequate amounts of vitamin D. In three patients taking phenytoin and primidone, primary intestinal or renal pathology was excluded. The fourth patient who was taking primidone only had a mild gluten sensitivity enteropathy; her severe bone disease proved refractory to dietary treatment and she required large doses of vitamin D in addition. Treatment with varying amounts of vitamin D and with ultraviolet light was carefully monitored in two patients; the other two were diagnosed only in retrospect. Drug-mediated enzyme induction may cause a greatly increased rate of inactivation of vitamin D in these patients.

### ANSWER—Electrocardiogram of the Month

Rate—rather irregularly irregular between 66 and 50/min.

PR = 0.16

QRS = 0.08

QT = 0.44

There are small non-diagnostic Q waves in II, III, AVF—the inferior leads. Their appearance de novo might indicate an inferior or diaphragmatic infarction. However, when of this relatively small size, they may be a normal finding. The T waves are abnormally inverted in the same inferior leads and there is ST segment straightening with this as well as in V<sub>5,6</sub>. This adds a bit of strength to those who would argue for "infarction Q's" in II, III, AVF. The arrhythmia, however, is the big stumbler—go back and look at it again—the rhythm strips in particular. This is Sino-Atrial Wenckebach—basically a Mobitz I type block between the sinus node and the atrium. Inasmuch as you can't see sinus depolarization, you have to sleuth it out every time you are confronted by this degree of what otherwise appears like sinus arrhythmia. The timing of the sinus beats is indicated by the small ' marks above the ECG. When the sinus beat is blocked, I've indicated this with a /. Thus the rhythm shows 5:4, 4:3, 5:4, 5:4, 3:2, 4:3, 6:5 block. Underlying all of these different blocks is the same sinus interval marked by the — and this is the paramount clue for this dysrhythmia. The sinus is firing at approximately 74/min.

## MEDICINE IN THE



### THE MONTH IN WASHINGTON

Only a handful of some 2,600 health related bills introduced into the 92nd Congress have become public law. The most talked about pieces of health legislation over the past two years . . . national health insurance and health maintenance organizations . . . have been set aside for deliberation by next year's 93rd Congress.

After long years of debate by two sessions of the Congress, the Social Security catch-all legislation (H. R. 1) with its significant amendments to Medicare and Medicaid gained passage and has been signed into law by the President. Three of its measures are of major importance to physicians.

First is the Professional Standards Review Organization (PSRO) proposal of Utah's Senator Wallace Bennett which is designed to improve quality and utilization review of health care on a national basis. This provision of the law stresses that over the next two years peer review will be concentrated in institutional settings rather than in physicians' offices, such review to be undertaken by physician organizations only.

Second, the new law stipulates that Medicare and Medicaid patients may receive care from health maintenance organizations (HMO's) but that federal reimbursement for such care will be no greater than for similar services rendered by non-HMO providers.

Third, the new law grants certain chiropractic benefits to Medicare and Medicaid patients. As passed by the Senate, chiropractic benefits were limited only to manipulation of the spine. In joint conference, House members further modified the Senate provision to require that chiropractic benefits be covered only after an x-ray revealed subluxation. The language of the law is not specific, but apparently the x-ray cost will not be paid for by Medicare, nor may the x-ray be interpreted by a chiropractor. However, this point will not be clarified until the regulations are written. The provision also requires that chiropractors, in order to be reimbursed, must meet minimum standards established by the

Secretary, Department of Health, Education and Welfare.

#### Peer Review

Under the peer review provision of the new law, local medical societies will have the opportunity to establish peer review mechanisms, operating independently, to review the quality of care hospitals and nursing homes provide to Medicare and Medicaid patients.

Task of the PSRO is to "assure proper utilization of care and services . . . utilizing a formal professional mechanism representing the broadest possible cross-section of practicing physicians in an area."

The HEW Department could reach agreement only "with a qualified organization which represents a substantial proportion of the physicians in the geographical area . . ." If this isn't achieved by 1976, HEW could turn to some other group to establish the PSRO.

A PSRO would be required to review only institutional care and services through 1975 unless it chooses — with approval of the government — to broaden the scope to include private practice.

During the pre-1976 period, 10 percent or more of the practicing physicians in an area could demand a poll of all practicing physicians to determine whether the organization negotiating to set up a PSRO substantially represents the physicians of the area. A more than 50 percent "no" vote would break-off the negotiations.

From now until the end of next year, the HEW Department is ordered to establish PSRO areas around the country (usually 300 or more physicians). In some cases it is believed that entire smaller states will be designated as PSRO areas.

In carrying out its responsibilities the PSRO would be required to regularly review provider and practitioner profiles of care and service (that is, the patterns of services delivered to Medicare and Medicaid beneficiaries by individual health care practitioners and institutions) and other data to evaluate the necessity, quality, and appropriateness of services for which payment may

be made under the Medicare and Medicaid programs.

The PSRO would be expected to analyze the pattern of services rendered or ordered by individual practitioners and providers and to concentrate its attention on situations in which unnecessary, substandard, or inappropriate services seem most likely to exist or occur.

A PSRO would have authority to approve the medical necessity of all elective hospital admissions in advance — solely for the purpose of determining whether Medicare and Medicaid will pay for the care. The PSRO would also be required to acknowledge and accept, in whole or in part, an individual hospital's own review of admissions and need for continued care, on a hospital-by-hospital basis, where it has determined that a hospital's "in-house" review is effective. It is expected that where such "in-house" review is effective this authority would be exercised by the PSRO. Similarly, a PSRO would be required to acknowledge and accept for its purposes, review activities of other medical facilities and organizations, including those internal review activities of comprehensive prepaid group practice programs such as the Kaiser Health Plans and the Health Insurance Plan (H. I. P.) in New York to the extent such review activities are effective.

The PSRO would (after reasonable notice) recommend to HEW appropriate action against persons responsible for gross or continued overuse of services, for use of services in an unnecessarily costly manner, or for inadequate quality of services and would act to the extent of its authority and influence to correct improper activities.

Where a review organization finds that voluntary and educational efforts fail to correct or remedy an improper situation, it would transmit its recommendations concerning sanctions through a statewide council to the secretary of HEW.

The secretary could terminate or suspend Medicare and Medicaid payments for the services of the practitioner or provider involved, or assess an amount reasonably related to the excessive costs to the programs deriving from the acts or conduct involved.

A PSRO would have the responsibility of determining — for purposes of eligibility for Medicare and Medicaid reimbursement — whether

care and services provided were: first, medically necessary, and second, provided in accordance with professional standards. Additionally, the PSRO where medically appropriate, would encourage the attending physician to utilize less costly alternative sites and modes of treatment.

The PSRO would not be involved with questions concerning the reasonableness of charges or costs or methods of payment nor would it be concerned with internal questions relating to matters of managerial efficiency in hospitals or nursing homes except to the extent that such questions substantially affect patterns of utilization. The PSRO's responsibilities are confined to evaluating the appropriateness of medical determinations so that Medicare and Medicaid payments will be made only for medically necessary services which are provided in accordance with professional standards of care.

The local PSRO would be primarily responsible for review of all Medicare and Medicaid services rendered or ordered by physicians in its area. The purpose of the provision is to establish a unified review mechanism for all health care services under the aegis of the principal element in the health care equation, the physician.

#### **HMO Option**

The legislation contains the Administration's request for allowing Medicare-Medicaid beneficiaries to enroll in HMO's, but limits the choice to existing pre-paid group practicing plans by providing that incentive reimbursement would be available only to HMO's with a minimum membership of 25,000 and which have been in operation for at least two years. Instead of the Administration's plan for paying such HMO's 95 percent of the combined part A and part B costs of Medicare patients in an area, the bill sets out a formula under which HMO's would receive one-half of the savings if care has been rendered for less than the Medicare average in an area (the so-called incentive reimbursement), but would have to absorb the entire loss if HMO treatment for Medicare beneficiaries runs higher than regular Medicare costs in the area.

The Joint Conference rejected a provision that would have made the federal government share in the losses of HMO care to Medicare patients, as well as a provision that would have established a bonus arrangement for states providing HMO care for Medicaid beneficiaries.

### **Chiropractic**

Inclusion of chiropractic benefits for the first time in a federal program was a set back to the medical profession, the Administration, and numerous other anti-chiropractic forces. However, the modification of the chiropractic benefit language in conference may make it practically unworkable. As passed by the Senate, chiropractic benefits were limited to manual manipulation of the spine. In conference, this was modified to require that benefits would be covered only after an x-ray revealed subluxation. Apparently the x-ray cost will not be covered, nor can it be interpreted by a chiropractor, but these points will not be clarified until regulations are written.

Senator Edward Kennedy attempted by an amendment from the floor to strike the chiropractic provision, but it was soundly defeated by a vote of 66 to 6. Subsequently, the Massachusetts senator admonished the AMA for not supporting his amendment.

However laudable his effort, Senator Kennedy — an experienced parliamentarian — should have recognized that his attempt to strike the chiropractic provision had no chance of success. His amendment to H. R. 1 was unprinted; he introduced it from the Senate floor; and he proceeded without the cooperation of the bill's floor manager. That his approach was ill-advised from the standpoint of effective parliamentary procedure is evidenced by the amendment's lopsided defeat.

Prior to the introduction of his amendment, the Senator's staff was counseled by anti-chiropractic forces — including the AMA — that he did not have the votes. Further, it was pointed out that an overwhelming defeat of his amendment by a recorded vote would seriously hamper the Senate conferees in their efforts to bargain with members of the House in joint conference.

On several occasions in the past, the Senate Finance Committee has added a similar chiropractic provision to a pending measure. But in each of these cases the Senate conferees later agreed to its deletion in joint conference with the House. In large part this was made possible because the chiropractic issue had not been singled out for separate vote on the Senate floor, and thus did not specifically pin down the Senate conferees.

In the latest instance, Senator Kennedy raised the issue singly and separately. Predictably, his

amendment was roundly defeated.

Unfortunately, the effect of this was to impress the Senate conferees with the recorded wishes of the vast majority of their colleagues when they sat in joint conference with the representatives of the House. In conference, however, Rep. Wilbur Mills was able to modify the Senate language so as to require an x-ray determination of subluxation.

### **Other Provisions**

- Renal disease — individuals under the age of 65, covered by social security, would be eligible for Medicare if they required hemodialysis or renal transplantation. This is the second instance in the bill of extending Medicare to younger-than-65 people.

- Abusers — providers determined to have overused Medicare could have their services under the program terminated under stronger powers granted the HEW Department against abusers.

- Black lung — eliminated was a Senate provision that would have extended Medicare coverage to people receiving "black lung" benefits under social security.

- Publicity — adopted is a requirement that HEW Department make public information from a survey of health facilities or organizations on the absence or presence of "significant deficiencies." Also the government must make public evaluations and reports dealing with individual contractor performances of carriers, intermediaries and staff agencies as well as program validation survey reports with names of individuals deleted.

- Joint Commission — HEW could enter into agreements to have states survey a hospital or hospitals certified by the Joint Commission on Accreditation of Hospitals on a limited basis where an allegation has been made that adverse health conditions exist.

- Eyeglasses, etc. — rejected was a senate provision adding Medicare part B benefits for poor families the costs of eyeglasses, podiatric services, dentures and hearing aids.

Left intact in the measure is a limitation on physicians' prevailing charge levels under Medicare. Recognized as reasonable are only those charges which fall within the 75th percentile (a

charge that covers 75 percent of the existing case charges for a procedure or treatment in an area excluding the top 25 percent of charges), a step that Social Security already has carried out administratively. Starting next year, under the bill, future charge increases would be limited by a factor which takes into account increased costs of practice and the increase in earning levels in an area.

Stricken from the bill was a \$900 million provision to add drugs as an outpatient Medicare benefit, as well as a plan that would have established an Inspector General over Medicaid and Medicare in the HEW Department.

#### **Fort Smith Trauma Committee**

Westark Community College in Fort Smith now offers a one semester credit course for emergency medical technicians. The course, which was originated at the request of the Fort Smith Trauma Committee, is designed to upgrade the training of ambulance drivers as emergency medical technicians. Members of the Trauma Committee will serve as instructors. Dr. Peter Irwin is chairman of the committee.

#### **Medical Librarian Retires**

Ruth Arnold Leveck, for the past ten years head librarian at Baptist Medical Center, retired January 1st. She was a free-lance writer before she earned her Masters Degree in Library Science from Peabody College. She holds earned degrees in Liberal Arts and Sciences with a major in English from the University of Illinois with a B.A., and University of Arkansas with an M.A.

Mrs. Leveck has been listed in *Who's Who of American Women*, *Who's Who in Library Science*, *Dictionary of International Biography*, *Who's Who in Arkansas*, and other collective biographies.

#### **Tenth Councilor District Meets**

Mr. Eugene Warren, the Arkansas Medical Society's legal counsel, was the guest speaker at the Tenth Councilor District meeting held January 9th in Fort Smith. Mr. Warren explained the new narcotics regulations. He stated that the penalty for violating these regulations is a \$4,000 fine and/or one year in jail. Mr. Warren, upon request, will address county medical societies regarding this subject. Dr. C. C. Long of Ozark and Dr. A. S. Koenig of Fort Smith serve as Councilors for the Tenth District.

#### **REPORT OF AMA CLINICAL MEETING**

**November 26-29, 1972**

**Cincinnati, Ohio**

**Purcell Smith, Jr., M.D., Delegate\***

The AMA Clinical Meeting in November 1972 was one of the quieter AMA meetings in recent years, as there seemed to be less controversy on the floor of the House of Delegates, and there was no disturbance whatever in the way of protests, disruptions, etc. The House of Delegates met for a total of eight hours and fifty-five minutes, acting on 59 reports and 65 resolutions.

Dr. Carl A. Hoffman in his presidential address indicated that he feels the two major medical problems in the United States are the protection of Americans from financial ruin by catastrophic illness and the maldistribution of the physicians as it affects the inner city and rural areas. He advocated insurance coverage for catastrophic illness, suggesting that certain conditions such as hemophilia, stroke, severe burns, and severe injuries be specified as catastrophic. Dr. Hoffman suggested for consideration a "strictly voluntary" program that might alleviate the maldistribution of physicians. The program would provide state or federal financing for needy students who would sign an unbreakable contract to practice in medically deprived areas for three or four years.

Much of Dr. Hoffman's presentation was in the form of slides showing highlights of his recent trip to England, Sweden, West Germany, and the Soviet Union. He indicated that he was impressed by the fact that health care problems of the United States also are to be found in these other nations, though economic, political, and cultural conditions are quite different from our own. The remarks and proposals of the President were referred to the Council on Medical Service.

Specific items of business considered by the House included:

1) *PSRO*. This issue was the one that caused the most interest at the meeting. The House of Delegates adopted a statement that "The AMA will provide a dominant role of leadership in the implementation of the PSRO program to assure that the best interests of the public and the profession are preserved". It was noted that while PSRO legislation was pending in Congress, the AMA questioned whether its emphasis

\*4001 West Capitol, Little Rock, Arkansas 72205.

on cost control might not lead to a lowering of the quality of medical care. But since it is now law, it was felt the AMA should act to guard the interests of the public and the profession. An AMA Advisory Committee on Professional Standards Review will be created by the Board of Trustees. This Advisory Committee will have responsibility to provide input from the medical profession in the development of rules and regulations governing PSRO, to assist state or county societies in developing PSRO's and to aid in defining appropriate geographic boundaries for PSRO's.

2) *Budget and Fiscal Restraint.* The 1973 budget anticipates gross revenues of just over \$37 million and operating expenses of \$36,322,000, leaving a projected surplus of about \$800,000. Budget cutting action recently taken by the Board of Trustees was approved by the House of Delegates. This action included the termination of four councils and six committees. Another economy action was making specialty journals available on subscription only, starting January 9, 1973. Prism, the AMA's new socio-economic publication, will be sent as a membership benefit, along with the JAMA.

3) *Terms of Trustees.* At present, trustees serve three year terms, with a maximum of three terms. The majority of Delegates voted for a maximum of only two such three year terms. The matter was referred to the Council on Constitution and Bylaws for study and possible recommendations.

4) *Medical Care of the Poor.* Since the House of Delegates in 1971 urged creation of state and local medical society committees concerned with health care of the poor, 23 state and 29 local societies have set up such panels for developing programs to improve health care services. Report G of the Council on Medical Service emphasized that local systems must be developed to meet local needs. The House urged organized medicine to continue to provide assistance and work to improve the quality of care in free clinics, which are increasing in number (currently there are more than 200 of them in 30 states). It was pointed out that these clinics provide a variety of services for people who might not otherwise receive any health care.

The House also approved a statement on the concept of health outreach, whereby lay workers serve to bridge the cultural gap between pa-

tients, professional staff and the community, and assist in effective delivery of health care. Among several sound reasons for using such workers, the report says, is that they free doctors and other health professionals to better utilize their time and thus extend the scope of their services. The statement recommends that the AMA, state and local medical societies encourage the use of such personnel, and that the AMA institute educational activities for physicians and other health professionals on the use of outreach workers.

5) *Blood Banks.* Report N of the Board of Trustees was adopted; it deals with new federal regulations in regard to collection and distribution of blood. Among the recommendations to be given to a federal panel on blood banking are: That operating standards of the American Association of Blood Banks and the American Red Cross be recognized and accepted, and that physicians be represented on any national panel set up to advise on procurement or use of blood, and that programs to increase voluntary blood donation be encouraged.

6) *Young Physicians.* The Council on Long Range Planning and Development will be expanded to include one Intern and Resident member of the AMA as a full voting Council member. The Speaker announced that he intends to name Dr. John Mather of the University of Maryland Hospitals, outgoing chairman of the Interns and Residents session, to the post. Proposals to appoint an intern or residents to the Councils on Medical Education and Medical Service were deferred, and the council on Constitution and Bylaws was directed to offer specific recommendations for action at the 1973 annual meeting. For the first time in the history of AMA, a medical student took his seat in the House of Delegates. He is George Blatti of Minneapolis, a senior medical student of the University of Minnesota Medical School. In other action, the House set annual dues for student AMA members at \$15.

7) *Elections.* Three AMA members of the new Coordinating Council on Medical Education were elected: Merrill Hines of New Orleans, Bernard Pisani of New York, and Tom Nesbitt of Nashville, Tennessee.

8) *IRS Ruling.* The House was informed that an Internal Revenue Service ruling, which barred physicians from withdrawing voluntary

contributions to their Keogh Law plan prior to disability or age 59½ years, will be revised to permit withdrawal of such contributions made to a qualified plan prior to March 6, 1972. The AMA had vigorously protested the ruling, and delegates complimented AMA staff for its "prompt and effective action".

9) *Awards.* Dr. George Whipple, winner of the 1934 Nobel Prize in medicine, was selected to receive the Distinguished Service Award of the AMA. He won the Nobel Prize for his work in pernicious anemia. Bob Hope, the famed entertainer, will receive the Layman's Citation for Distinguished Service. His contribution to the Eisenhower Medical Center in Palm Springs, California, including its 80-acre site, totals nearly \$1.5 million. Mr. Hope also has staged fund-raising dinners which have brought another \$3.5 million to the center. Both awards will be presented at the 1973 annual meeting in New York.

## THINGS TO COME

### Fayetteville VA Hospital Participates in Program

The Veterans Administration Hospital in Fayetteville is participating in a postgraduate medical education program presented by the Veterans Administration (VA) in cooperation with the Medical Media Network (MMN). The VA/MMN system disseminates current medical knowledge by way of 8mm. films which are supplemented by an active learning program involving guest speakers, study guides, and self-testing devices. The Fayetteville Hospital will receive the program in the following order: weeks of January 22nd to February 2nd, "Sound in the Human Body"; weeks of February 12th to February 23rd, "Pulse of Life"; weeks of March 5th to March 16th, "Man Through the Maze"; weeks of March 26th to April 6th, "Temporary Artificial Cardiac Pacemakers: Indications for Use".

### Scientific Writing Course

A course in Scientific Writing sponsored by the Tulane University Department of Surgery

will be held February 6-7, 1973, at the Royal Sonesta Hotel, New Orleans, Louisiana. For more information write: Dr. Robert L. Hewitt, Department of Surgery, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, Louisiana 70112.

### Cardiology Course

A three-day "Cardiovascular Emergencies" course will be held March 1-3, 1973, at the Convention Center in Shreveport, Louisiana. The program is approved for twenty hours of prescribed credit by the American Academy of Family Physicians and is co-sponsored by the Council of Clinical Cardiology of the American Heart Association, Louisiana State University School of Medicine, and the Louisiana Heart Association. For more information write: Mrs. Gail Magzamen, American Heart Association, 44 East 23rd Street, New York, New York 10010.

### Short Courses Offered at UAMC

Several physicians have expressed an interest in short, intensive courses in various areas such as orthopedics, pediatrics, etc. Most departments at the University of Arkansas Medical Center are willing to work out such sessions for any individual physician. For assistance, please contact the Head of the specific department of interest, or the Rural Arkansas Medical Extension Service, UAMC—Slot 525, 4301 West Markham, Little Rock, Arkansas 72201.



### Dr. Howell E. Leming

Dr. Howell E. Leming of Fayetteville died November 11, 1972. He was born January 16, 1900, at Dardanelle, Arkansas.

Dr. Leming graduated magna cum laude from Hendrix College and was a graduate of the University of Arkansas School of Medicine. He was associated with the Veterans Administration Hospital in Hines, Illinois, before moving to Fayetteville, where he was a member of the staff of the Veterans Administration Hospital for a long period of time before engaging in private practice. Dr. Leming retired in 1971.

## OBITUARY

He was a member of St. Paul's Episcopal Church and a member of the Washington County Medical Society, the Arkansas Medical Society, and the American Medical Association.

Dr. Leming is survived by his wife, Mrs. Lorena Lowe Leming, one son, and three grandchildren.



## PERSONAL AND NEWS ITEMS

### **Dr. Saltzman Guest Speaker**

Dr. Ben N. Saltzman of Mountain Home was the guest speaker at a recent meeting of the Osceola Rotary Club. Dr. Saltzman spoke on Socialized Medicine and he also discussed his visit to England this year.

### **Physicians Attend Course**

Dr. Julian Fairley and Dr. George Pollock, both of Osceola, attended the postgraduate course in coronary care which was conducted at the University of Arkansas Medical Center October 23rd-27th.

### **Physicians Elected**

Dr. Ben N. Saltzman has been elected chief of staff of the Baxter General Hospital. Dr. Saltzman served as the hospital's first chief of staff when it was opened in 1963. Dr. Maxwell G. Chaney was elected vice chief of staff. Dr. Robert L. Kerr, the outgoing chief, served for two years.

### **Physician Celebrates Birthday**

Dr. J. H. McCurry of St. Louis celebrated his one-hundredth birthday November 16, 1972. Dr. McCurry practiced medicine in Arkansas until his retirement five years ago. He is a Life Member of the Arkansas Medical Society and a member of the Craighead-Poinsett County Medical Society.

### **Caduceus Club Elects New Officers**

Dr. Neil Crow of Fort Smith was recently installed as president of the Arkansas Caduceus Club. Other newly elected officers are: Dr. Asa Crow of Paragould, president-elect; Dr. Nathan Poff of Heber Springs, first vice president; and Dr. John Joyce of Little Rock, secretary. New members of the Caduceus Club Board of Trust-

ees are: Dr. Jack Harrison of Texarkana; Dr. Ralph Wooley of Pine Bluff, and Dr. E. Morgan Collins of Forrest City.

### **Physician Locates**

Dr. Jerry Dorman, a general surgeon, has joined his father, Dr. John W. Dorman, and his brother, Dr. John E. Dorman, in the practice of medicine at 1203 Sunset, Springdale.

### **Speakers Bureau**

Dr. Charles G. Swingle of Marked Tree was the guest speaker at the January 10th meeting of the Trumann Lions Club. Dr. Swingle's subject was "Health in a Changing Rural Environment".

Dr. S. E. Landrum of Fort Smith spoke at the January 26th meeting of the Booneville Rotary Club on "Emergency Medical Services".

### **Physician Serves as Regional CPR Director**

Dr. Maxwell G. Cheney of Mountain Home is serving as a regional Cardiopulmonary Resuscitation Director of the Arkansas Heart Association. Dr. Cheney serves the counties of Baxter, Boone, Carroll, Marion and Newton. Dr. Ben O. Price of Little Rock is president-elect of the Arkansas Heart Association and Dr. Ben N. Saltzman of Mountain Home is a member of the board.

### **Dr. McCracken Named Commander**

Dr. E. A. McCracken of Stuttgart has been named commander of the 125th Medical Battalion, Arkansas National Guard. The battalion has four units—Headquarters, North Little Rock; 204th Dental Detachment, Little Rock; 296th Ambulance Company, Charleston; and the 216th Ambulance Company, Lake Village.

Dr. McCracken had previously been chief of medical service, 148th Evacuation Hospital, and company commander of the Medical Company at Booneville.

#### **Dr. Saltzman Attends Meeting**

Dr. Ben N. Saltzman of Mountain Home attended the First National Conference on the Developmentally Disabled which was held in Washington, D. C. Dr. Saltzman is a member of the Arkansas Planning and Advisory Council on Services and Facilities for Developmentally Disabled.

#### **Physician Elected to Membership**

Dr. J. Hosea Young of Wynne has been elected to active membership in the American Academy of Family Physicians.



## **PROCEEDINGS OF SOCIETIES**

#### **COUNCIL MINUTES**

The Council met at 10:00 A.M. on Sunday, December 3, 1972, at the Sheraton Hotel in Little Rock. Present were: Long, Watson, Wood, Shuffield, Farris, Saltzman, Fairley, Kirkley, J. Bell, P. Gray, P. Bell, D. Gray, Irwin, Burge, Duzan, Jameson, McCrary, Bethel, Orr, Kolb, Kirby, Henry, Koenig, Applegate, Kennedy, Fowler, Thomas, Hyatt, Verser, Ellis, Chudy, Wilkins, George Mitchell, Edgar Easley, James Weber, T. E. Townsend, Purcell Smith, Charles Silverblatt, Winston Shorey, Daniel Anderson, Ruth Steinkamp, Mrs. Gray, Bryant Swindoll, W. A. Hudson, Henry Hearnberger, Joe B. Scruggs, Neil Compton, Harold Hutson, Lee Parker, D. G. Browning, Mr. Paul Harris, Mr. Eugene Warren, Mr. Schaefer and Miss Richmond.

The Council transacted business as follows:

1. Upon the motion of Saltzman, the Council voted to approve the "unified credit plan" for AMA-ERF contributions in Arkansas, giving the Auxiliary project credit for all contributions.
2. The Council authorized the Executive Committee to designate representatives to attend

the AMA Leadership Conference in Chicago. Motion by Koenig.

3. The Council voted, upon motion by Kirkley, to sponsor a "Mediterranean Adventure" by International Travel Advisors as a travel program for Society members.
4. Upon the motion of P. Gray, the Council voted to co-sponsor with the Hospital Association an institute June 1-3, 1973, for hospital trustees, administrators and physicians.
5. The Council voted, upon motion of Farris, to endorse the Children's Medical Camp sponsored by the Pediatric groups and to contribute \$90 for three camp scholarships.
6. Upon the motion of Fairley, the Council voted to submit the name of Glen Baker of Jonesboro as a nominee for the first congressional district vacancy on the State Board of Health, as a substitute nominee for John B. Kirkley.
7. The Council voted to appoint a committee to investigate the feasibility of establishing a medical museum for the State. Motion for approval was by Saltzman.
8. Ruth Steinkamp described the Uterine Cancer Task Force Program of the Cancer Society and requested Society support. Upon motion of Koenig and Saltzman, the Council voted to endorse the program aimed at getting patients to physicians' offices for pap tests and to provide assistance in informing physicians of the program.
9. Upon motion of Saltzman, the Council voted to approve in principle legislation proposed by the Arkansas Family Planning Council removing age restriction on birth control counseling.
10. The Council voted, by motion of McCrary, to endorse legislation for the State Medical Board to select its own attorney.
11. Daniel Anderson reported on a meeting of the National Joint Practice Commission which he attended in November.
12. Amail Chudy, chairman of the Auxiliary Liaison Committee, presented a proposed program of the Auxiliary for selling placards on mouth-to-mouth resuscitation. Upon the motion of D. Gray, the Council voted to advance the Auxiliary \$500 to get the project started.
13. C. R. Ellis, chairman of the Medicine and

Religion Committee, reported on the successful conference held in October and refunded \$150 of the \$400 which the Council authorized for underwriting the meeting.

The meeting adjourned at 11:45 A.M.

APPROVED: C. C. Long, M.D.

Chairman of the Council

#### **HOUSE OF DELEGATES**

The House of Delegates was called to order at 2:15 P.M. on Sunday, December 3, 1972, in the Sheraton Hotel, Little Rock.

The following delegates, officers and members seated as delegates were present:

BAXTER, John F. Guenthner; BENTON, James R. Knapp; BOONE, Robert Langston; CHICOT, John P. Burge; CLARK, James T. Blackmon; CLEBURNE, William M. Wells; CRAIGHEAD-POINSETT, John B. Kirkley; CRITTENDEN, H. G. Lanford; DALLAS, Jack T. Dobson; DESHA, Guy U. Robinson; DREW, C. Lewis Hyatt; GARLAND, William Mashburn, Thomas Burrow, R. J. Bracken; GREENE-CLAY, A. J. Baker; HEMPSTEAD, Jim McKenzie; HOT SPRING, Robert H. White; INDEPENDENCE, Jim Lytle; JEFFERSON, W. R. Meredith, T. E. Townsend; JOHNSON, Boyce West; LAWRENCE, J. B. Elders; LEE, E. C. Fields; MILLER, A. E. Andrews; MISSISSIPPI, Joseph Beasley; MONROE, N. C. David, Jr.; NEVADA, H. Blake Crow; OUACHITA, A. E. Thorn; PHILLIPS, Bernard Capes; POPE-YELL, James M. Kolb; PULASKI, James L. Smith, Frank M. Westerfield, Curry B. Bradburn, James R. Weber, Charles W. Logan, Ashley S. Ross, Hoyte R. Pyle, Harold G. Hutson, George K. Mitchell, Jerome Levy, Dale Alford, Jasper McPhail, Winston Shorey, Paul Cornell, Edgar Easley, D. G. Browning; SALINE, Donald Viner; SEARCY, John A. Hall; SEBASTIAN, Annette Landrum, Griffith Ferrell, Samuel Landrum, Carl Williams, Kenneth E. Lilly; ST. FRANCIS, George T. McPhail; UNION, Jacob P. Ellis, T. E. Tommey; WHITE, Arlis W. Loe; COUNCILORS Eldon Fairley, John B. Kirkley, John Bell, Dwight Gray, L. J. P. Bell, Raymond Irwin, John P. Burge, Kenneth R. Duzan, J. B. Jameson, James C. Bethel, Robert McCrary, W. Payton Kolb, William S. Orr, Morris Henry, Henry V. Kirby, C. C. Long, A. S. Koenig; PRESIDENT Robert Watson; PRESIDENT-ELECT John P. Wood; SPEAKER Amail

Chudy; VICE SPEAKER Charles F. Wilkins, Jr.; SECRETARY Elvin Shuffield; TREASURER Ben Saltzman; PAST PRESIDENTS, Lewis Hyatt, H. W. Thomas, Joe Verser, C. R. Ellis and Stanley Applegate.

Speaker Chudy introduced guests as follows: Robert Webb, President of the Arkansas Chapter of the Student American Medical Association; Representatives of the Senior Class of the University of Arkansas School of Medicine, Jim Miller, Jim McMillan, and David Stewart; Representatives of the Junior Class of the University of Arkansas School of Medicine, Bill Meredith, Tom Jefferson, and Carl Garner.

The House gave recognition to Leah Richmond, Assistant Executive Vice President, who has been employed by the Society for twenty years.

Speaker Chudy called on the Chairman of the Legislative Committee, Elvin Shuffield, for a report from his committee. House action on legislative proposals presented by Dr. Shuffield was as follows:

1. Attorney for State Medical Board.  
The House voted, upon motion of Shuffield, to support legislation to amend the Reorganization Act to authorize the State Medical Board to select its own attorney, Eugene Warren, to represent it.
2. The House approved a proposal, upon motion of Shuffield, that the State Medical Board be granted authority to handle cases dealing with overcharging and overtreating.
3. A. The House approved the definition of "Physician's Assistant" as: "a skilled person qualified by academic and practical, on-the-job training to provide services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant".  
B. Upon the motion of Applegate, the House directed the Legislative Committee to work for certification rather than licensure of physician assistants.  
C. The House voted, upon motion of McCrary, in favor of empowering the State Medical Board to establish the qualifications necessary for certification as a Physician Assistant.  
D. Upon the recommendation of Shuffield, the House approved establishing separate categories of Physician's Assistants

with duties and functions of every category enumerated by regulations adopted by the Board.

E. Upon motion of Applegate, the House adopted the following definition of the phrase "under the supervision of a licensed physician": "the performance of medical acts outside the presence of the physician but under circumstances where the physician could be reached by communication facilities".

F. Upon the motion of Ellis, the House adopted the recommendation that the Physician Assistant Act provide that a physician shall not be responsible in damages for acts of the Physician Assistant if (a) the Arkansas State Medical Board has certified the assistant, (b) the acts authorized by the physician are within authorized functions of the Physician's Assistant, and (c) the physician has cautioned the assistant not to perform any medical acts except those for which the Physician's Assistant has been certified as competent.

G. Upon motion of Verser, the House voted to recommend annual renewal of certification of Physician Assistants.

H. The House voted, by motion of Shorey, that the act should provide for revocation or suspension of certification for unprofessional conduct and should define unprofessional conduct.

I. By motion of Elders and Lilly, the House voted in favor of excluding Registered Nurses and Licensed Practical Nurses from the Physician's Assistants Act and recommending revision of laws governing nurses to enlarge functions of nurses.

J. By motion of Blackmon, the House voted to recommend that separate legislation be proposed establishing gradation of skills which physicians may delegate to registered nurses and to practical nurses.

K. The House voted, upon motion of Shufield and Kirkley, to support legislation for certification of Physician's Assistants in accordance with above provisions.

4. The House voted, upon motion of Shufield, to recommend passage of an Emergency Ambulance Technician Bill.

5. Upon the motion of Orr, the House voted to disapprove in principle proposed legislation for licensure of medical technologists.

6. The House opposed a proposal that nurses be legally authorized to perform the delivery of infants.

7. The House tabled a proposal regarding an Emergency Medical Technician bill, upon the motion of Orr.

8. Upon motion of Wilkins, the House voted to reassert its previous resolution recommending that the Governor and the Legislature support the present program and work toward including the Associate Degree Nurse program in all State-supported colleges and universities.

9. The House voted, upon motion of Levy, to approve acceptance of foreign graduate nurses for examination and licensure in the State.

10. Upon motion by Irwin, the House voted to go on record as favoring periodic examination for driver's license but not to sponsor such legislation for introduction in the Legislature.

11. The House defeated a motion (by Thomas) that the Society request the Legislative Council to conduct a feasibility study concerning a second medical school for the State.

12. Upon motion of Orr, the House endorsed the budget request of the Medical Center.

13. The House approved, on motion of Orr, the budget request of the State Health Department.

14. The Chairman of the Committee on Maternal and Child Welfare requested support of the Child Day Care facilities program. Upon the motion of J. Smith, the House voted to approve the policies of the program as they have been established.

15. The House received for information (motion of J. Smith) a proposal from Joe Verser which would require graduates of the Medical School to serve two years in rural areas before being granted permanent licensure.

16. President Watson advised the members of the House that Dr. J. H. McCurry, formerly of Cash, had observed his 100th birthday on November 16th. The House gave recognition to Dr. McCurry for his long service

to humanity in the practice of medicine and his efforts in organizing the Fifty Year Club of the Arkansas Medical Society and the American Medical Association. The House voted congratulations to Dr. McCurry on the 100th anniversary of his birth.

The House adjourned at 5:35 P.M.

APPROVED: Amail Chudy, M.D.  
Speaker of the House

#### **Sebastian County Medical Society**

The Coronary Care Committee of the Sebastian County Medical Society, the Arkansas Heart Association, the Merck-Sharp and Dohme Post-graduate Program, Sparks Regional Medical Center, and St. Edward Mercy Hospital were sponsors of a two-day coronary disease seminar held November 30th and December 1st in Fort Smith. Local physicians who appeared on the program were Dr. Carl Williams, Dr. Leon Woods, Dr. Taylor Prewitt, Dr. Keith Klopfenstein, Dr. Edward Clemons, and Dr. Eldon Pence. Dr. Pence is chairman of the Coronary

Care Committee. Out-of-state speakers were Dr. Jack Davis of Kalispell, Montana, former assistant professor of medicine at the University of Arkansas Medical Center; Dr. Paul C. Houk of Oklahoma City, cardiologist and assistant director of Coronary Care, Oklahoma Regional Medical Program; and Dr. Charles W. Robinson, Jr., of Oklahoma City, cardiologist and associate clinical professor of medicine at the University of Oklahoma School of Medicine.

#### **Pulaski County Medical Society**

The Pulaski County Medical Society, in co-operation with the Metropolitan Life Insurance Company, recently launched a program of distributing a special survival kit to new families in Pulaski, White, Lonoke, Faulkner, Conway, Pope, Logan, Yell, Perry, and Saline Counties. The kit contains health and safety information geared to local resources that can be called on in emergencies and are planned to help families prevent panic and increase their effectiveness when quick action is necessary.



#### **NEW MEMBERS**

##### **Dr. William Thomas Huskison**

Dr. William T. Huskison is a new member of the Sebastian County Medical Society. He is a native of Memphis, Tennessee.

Dr. Huskison received his pre-medical education at Memphis State College and was graduated from the University of Tennessee College of Medicine in 1965. He completed a rotating internship at Baptist Memorial Hospital in Memphis and a three-year residency in Radiology at the University of Tennessee Affiliated Hospitals (City of Memphis Hospitals). He served two years with the United States Public Health Service.

Dr. Huskison has been associated with Radiologist, P.A., in Fort Smith for the past year.



#### **Boone County Auxiliary**

The Auxiliary to the Boone County Medical Society placed first for the best county exhibit with less than fifty membership at the annual meeting of the Southern Medical Association held in New Orleans, Louisiana, November 12-16, 1972. The exhibit was in the category of *Research and Romance of Medicine* and the subject was the story of Dr. Lorenzo D. Massey of Osceola. A scrapbook, with his autobiography and pictures, emphasized work he did in controlling malaria in Eastern Arkansas. Mrs. Henry V. Kirby presented the exhibit for Boone County Auxiliary since there is no organized auxiliary in Osceola.

#### **Saline County Auxiliary**

The Auxiliary to the Saline County Medical Society met November 13th at the home of Mrs. J. L. Martindale. A program on floral arrangement for the home was presented. Mrs. Donald Viner was program leader and Mrs. Walter Mizell presided at the meeting.

February, 1973

MAR 13 1973

# THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 69 No. 9

FORT SMITH, ARKANSAS

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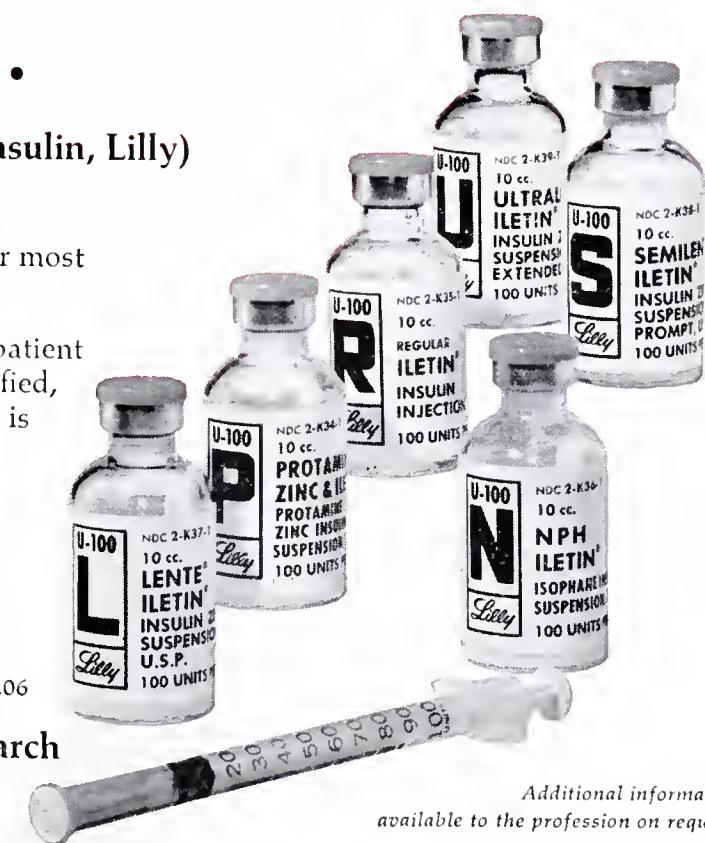
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\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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**THE JOURNAL OF THE Arkansas MEDICAL SOCIETY**

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## Fibrosarcoma Of The Breast

George V. Roberson, M.D., F.A.C.S.\*

### INTRODUCTION

Breast carcinomas, by their frequent but unfortunate occurrence, have lent themselves to close statistical scrutiny. As with any frequently occurring entity, large volumes of cases have been reported with meaningful statistics which have influenced diagnosis and treatment. Breast sarcomas, however, occur so infrequently that no one large volume of cases has been available to analyze. After encountering a fibrosarcoma of the breast a project was undertaken to collect as many complete cases from the literature as possible. It was hoped that a study of these cases would be informative for the surgeon when faced with the frozen section diagnosis of fibrosarcoma of the breast.

### MATERIALS STUDIED

Many fibrosarcomas of the breast have been recorded, but few have given sufficient information to allow analysis. Many have been only recorded as so many fibrosarcomas in a group of sarcomas of the breast. Some are represented in studies of fibrosarcomas of the body in general. Various articles were reviewed and where the information was available, a case or a group of tumors was utilized to compile a list of cases with regard to incidence, node metastasis and treatment. Even the ones included in these groups are far from complete and the total number is too small to be statistically significant. Fox reported the largest single series<sup>1</sup> of fibrosarcomas of the breast. In his article there were actually 42 cases of fibrosarcoma of the breast recorded. Many of these on review were thought to be cystosarcoma phylloides. The data on several other patients was insufficient, so only 11 of his cases were included. Of 10 cases of fibrosarcoma of the breast at the University of Tennessee Institute of Pathology, five were from the

John Gaston Hospital. The records from these five cases were available and are presented here and are included in the review. With the above reservations in mind, a closer look at these selected cases may provide more insight into the nature of fibrosarcoma of the breast.

### CASE REPORTS

#### Case Number 1. E. P.

JGH 446967 S66-8031

This sixty-eight year old patient was admitted August 26, 1966, with a one-month history of a lump in the left breast. Pain and tenderness were present, and a temperature of 100 was recorded on admission. An 8 x 10 cm. lump was in the left lower breast, which was red, warm and tender. Clinically, this was suspicious of an abscess or inflammatory carcinoma. Biopsy revealed a tumor with a necrotic hemorrhagic center and a "fish flesh" consistency. Frozen section diagnosis was probable fibrosarcoma. A simple mastectomy with removal of adjacent pectoral muscle and periosteum was done. The tumor margins, according to the pathologist, were adequate. The patient was followed in the West Tennessee Cancer Clinic, and on her third follow-up visit in November of 1967, a suspicious area overlying the ninth rib posteriorly was seen on chest x-ray. Approximately two years after her surgery she expired in the Baptist Memorial Hospital in Memphis on October 15, 1968 from metastatic fibrosarcoma of the breast.

#### Case Number 2. M. W.

JGH 127353 S62-5666

This fifty-seven year old patient was admitted July 10, 1962 with a four-month history of a right breast lump. She had had fever for three days after it was first noted. On admission her temperature was 101. In the right breast there was a 5 cm. area of redness with edema, induration and heat over the upper outer quadrant.

\*1708 Doctors Drive, Pine Bluff, Arkansas 71601. Senior Resident, City of Memphis Hospitals at John Gaston Hospital, Memphis, Tennessee, 1966 to 1967. Staff member, Jefferson Hospital, Pine Bluff, Arkansas, 1967 to 1970.

## FIBROSARCOMA OF THE BREAST

Small nodes were palpable in the axilla. The tumor was "shelled out" on July 13. The final path report was a low grade fibrosarcoma. A simple mastectomy was then performed on July 23. In September of 1964 she was treated with Cytoxan for nodules above the right diaphragm on the x-ray. In April of 1966 there was noted to be only one nodule slowly enlarging on review of all the films. A right middle and lower lobectomy was done which revealed metastatic fibrosarcoma in one lobe and multiple small granulomata with caseation throughout both lobes. This patient has been since followed closely in the Thoracic Outpatient Department of the West Tennessee Cancer Clinic and was last seen in August, 1969 with a normal chest x-ray and no evidence of recurrent disease.

### Case Number 3. E. P. JGH 314853 S58-6536

This eighty-four year old patient was admitted August 6, 1958 with a two-month history of a slightly tender left breast mass. A simple mastectomy was done and the path report was fibrosarcoma with osseous metaplasia. The patient was followed for five years until the spring of 1963 when she fell and hurt her back and has not since returned to the clinic for follow-up. She was contacted by telephone in November of 1966 and stated that she was doing well and had no further trouble with her breast and refused to come to the clinic for a check up. According to information from the Memphis and Shelby County vital records this patient died November 29, 1966 of a myocardial infarction.

### Case Number 4. P. R. JGH 16247 S51-3216

This thirty-five year old patient first developed fibrosarcoma of the left breast, excised elsewhere, in 1941. It recurred and was excised again in 1943. She was first seen at John Gaston Hospital in February of 1951 with recurrence in the left breast while six months pregnant. She was allowed to deliver, and in August of 1951 a simple mastectomy was done. She was last seen October 20, 1969 when examination was normal and a chest x-ray was negative. At that time she was twenty-eight years past the original diagnosis and eighteen years post simple mastectomy.

### Case Number 5. E. C. JGH 27520 S-31830

This twenty-eight year old patient was admitted November 6, 1941 and had a simple mastectomy for fibrosarcoma of the left breast. She was last seen in September, 1944, three years later, with a malignant pleural effusion.

A total of forty-four other cases were selected from the literature to assist in the evaluation of treatment, and these cases are listed in Table 9. These cases will be discussed under TREATMENT, with the inclusion of the five above cases. In addition, other groups of cases were found in the literature which were suitable for evaluation of the incidence of fibrosarcoma, lymph node involvement in breast sarcomas in general and lymph node involvement in fibrosarcomas of the breast, specifically. Thus, not all the cases reviewed are included in all of the tables, but they were utilized wherever information was sufficient for inclusion.

### INCIDENCE OF BREAST SARCOMAS

Many articles written about breast sarcomas have included sarcomas of all origins in discussions and frequently in over-all statistics.<sup>2,3,4,5,6,7,8,9,10,11</sup> Reports on fibrosarcomas may deal with tumors originating in all areas of the body.<sup>10,11</sup> Most fibrosarcomas originate in either the upper or lower extremities.<sup>11</sup> They may, however, be primary in the breast or in the pectoral fascia.<sup>12</sup> The general rate of occurrence of breast sarcomas in a tabulation of all malignancies of the breast is probably about 1 in 100, as shown in Table 1. At the University of Ten-

TABLE 1  
INCIDENCE OF BREAST SARCOMAS

Author	Year	Malig-nancies	Sarcomas	Per Cent
Schreiner,				
Thibaudeau	1932	1395	7	0.5%
Fox	1934	2000+	?	3.0%
Boldrey	1936	?	?	1.0%
Sailer	1938	1888	15	0.8%
Grimes	1953	1291	15	1.2%
Roberson	1966	1988	29	1.5%

nessee Institute of Pathology, through the year 1966, there were 1,988 diagnoses of breast malignancy made. Of these, 29, or 1.5% were sarcomas of variable origin. The fibrous variety of breast sarcoma is one of the most common,

accounting for about one-third of all the sarcomas. As noted in Table 2, this percentage may

TABLE 2  
INCIDENCE OF  
FIBROSARCOMA OF THE BREAST

Author	Year	Total Cases	Fibrosarcomas	Per Cent
		of Sarcomas	Number	
Goss	1887	156	—	68%
Gebele	1901	34	11	32%
Finsterer	1907	40	10	25%
Geist and		22	5	23%
Wilensky	1915	435	136	31%
Fox	1934	60	42	70%
Rogers	1942	22	18	82%
Roberson	1966	29	10	34%

be quite variable. Some of the higher figures are accounted for by those authors who included fibrosarcomas and cystosarcoma phylloides in one group. Of the 29 sarcomas at the University of Tennessee Institute of Pathology, 10 have been fibrosarcoma (34.4%) and 13 have been cystosarcoma phylloides (44.8%), accounting for 79.2% of all the sarcomas (Table 3).

TABLE 3  
SARCOMAS AT UNIV. OF TENN.  
INST. OF PATH.

Diagnosis	Number	Per Cent
Fibrosarcoma	10	34.4%
Cystosarcoma phylloides	13	44.8%
Chondrosarcoma	2	6.8%
Osteochondromyxosarcoma	1	3.4%
Osteogenic Sarcoma	1	3.4%
Angiosarcoma	1	3.4%
Sarcoma vs. Carcinoma	1	3.4%
TOTAL	29	100.0%

### CLASSIFICATION

In addition to their infrequent occurrence there is considerable variability in their manifestations. These two factors have apparently led to a state of complete disorganization in the classification of sarcomas in general. The list of terms in Table 4 enumerates the labels, or diagnoses, if you will, applied to sarcomas of the breast over the years. The tendency at first was to name neoplasms according to morphologic characteristics of components, resulting in this prolific terminology. Many of the terms convey little information as to the tissue of origin. Therefore, although one can speculate when re-

TABLE 4  
DIAGNOSES APPLIED TO  
BREAST SARCOMAS

Spindle Cell Sarcoma	Myosarcomas
Fibrosarcoma	Leiomyosarcoma
Fibromyxosarcoma	Rhabdomyosarcoma
Myxofibrosarcomas	Round Cell Sarcoma
Chondrosarcomas	Lymphosarcoma
Osteoid Sarcomas	Hodgkins Sarcoma
Osteochondrosarcoma	Myeloid Sarcoma
Cystosarcoma Phylloides	Oat Cell Sarcoma
Cystosarcoma	Giant Cell Sarcoma
Adenofibrosarcomas	Angiosarcoma
Adenosarcoma	Hemangioendothelioma
Alveolar Sarcomas	Perithelioma
Carcinosarcomas	Telanectatic Sarcoma
Mixed Sarcomas	Cylindroma
Liposarcoma	Melanotic Sarcoma
Myxoliposarcoma	Neurogenic Sarcoma
Polymorphous Cell Sarcoma	Plexiform Sarcoma

viewing the literature, it is difficult, and often impossible to be certain of exactly what such tumors were originally. The term "sarcoma" has also been loosely used as a convenient category for those neoplasms that were not frankly epithelial in nature.

Round cell sarcomas have likely been lymphosarcomas, or atypical carcinomas on many occasions. Alveolar "sarcomas" have likely been atypical carcinomas, as any attempted glandular formation should immediately suggest carcinoma. Carcinosarcoma is a confusing diagnosis for the surgeon who may feel that the prognosis or treatment for sarcomas is different than carcinoma and immediately wonders what will be an effective surgical procedure. Smithy reported 33 cases of "mixed tumors" or carcinosarcomas of the breast and found that 12, or 36%, of them had metastasis or recurrence.<sup>13</sup> In all of them the carcinomatous element was involved. The diagnosis should be given separately for the sarcomatous and carcinomatous element in these to give the emphasis to their malignant nature. Spindle cell sarcoma in the literature has frequently been the morphologic diagnosis for fibrosarcomas. Fibromyxosarcoma has represented a more active and anaplastic form of fibrosarcoma. It is this group of tumors, the most common sarcomas, that is to be discussed. Some actually feel that a "pure" fibrosarcoma is rare because the great majority have their origin in an adenofibroma.<sup>14,15</sup> But as Boldrey<sup>14</sup> himself has indicated, "who can tell? . . . Absence of epithelial elements does not eliminate the fibro-

adenoma as a precursor, but it certainly points the arrow of probability to a different quarter." Interestingly enough, Boldrey was unable to find any epithelial elements in any of his fibrosarcomas of the breast.

Cystosarcoma phylloides has presented a problem of classification for most authors. It has been included with fibrosarcomas and listed separately with about equal frequency in the articles reviewed. In contrast to fibrosarcomas, cystosarcoma phylloides is a tumor peculiar to the breast. It is a massive tumor, usually weighing several Kgs., and is thought to arise in a pre-existing fibroadenoma. While it usually acts in a benign manner, in some instances a true sarcomatous transformation may take place in the fibrous stroma. In other instances, a squamous metaplasia may take place with the formation of epithelial pearls. Fibrosarcomas, on the other hand, occur anywhere in the body, primarily in the extremities. While larger than carcinomas in general, it usually does not weigh more than a Kg. It arises in the fibrous stroma rather than in a preexisting fibroadenoma. It may arise in the pectoral fascia. Fibrosarcomas are always malignant, though they may vary in degree. There is no epithelial element associated with these lesions. For these reasons, cystosarcoma phylloides is not included with this group of fibrosarcomas. In reviewing the literature, those lesions that were thought to be cystosarcoma phylloides were excluded from the tables.

As might be suspected from the proliferation of diagnoses applied to the tumors, a standard classification of breast sarcomas does not exist. This also is a result of their rarity and histologic variation. Those classifications utilizing morphologic descriptions are generally of no value to the surgeon or pathologist. A classification based as nearly as possible on histologic origin would seem most desirable. The prognosis and likely routes of metastasis can more readily be assessed from such a classification (Table 5). It is the "pure cell variety" of fibrosarcomas that this review is concerned with.

#### CLINICAL PICTURE

Of the forty-nine patients selected because of some knowledge of their initial and final treatment (Table 9), the age was known in each instance also. Nearly half of all patients with fibrosarcoma of the breast were between the ages of 41 and 60. Three-fourths of all patients were

TABLE 5  
CLASSIFICATION OF  
BREAST SARCOMAS

1. Fibrosarcoma
  - A. Pure Cell Variety
  - B. Cystosarcoma Phylloides
2. Liposarcoma
3. Lymphosarcoma
4. Neurogenic Sarcoma
5. Myosarcomas
  - A. Leiomyosarcoma
  - B. Rhabdomyosarcoma
6. Angiosarcoma
7. Melanosarcoma
8. Undifferentiated Sarcoma

between the ages of 31 and 70. The patient usually presents with a complaint of a lump in one breast of two to six months duration. Not uncommonly, the lesion may be present several years. Some of the lesions recorded in Table 9 had been present for one, two, three, four, six and eight years.

While a breast mass is the most common complaint, pain is present in over one-third of the cases.<sup>3,7,8,16</sup> Pain was present in 3 of our 5 cases. Skin fixation is of little significance and edema and orange-peel effect is unusual.<sup>16</sup> Some of our cases were noted to have a reddened and warm skin overlying the tumor itself. Other reports have pointed this out.<sup>2,3,7,16,17</sup> Some patients have actually presented with an elevated temperature that was thought to be attributable to the tumor (Case 1 and 2). It was frequently tender to palpation. This inflammatory type presentation may be a clue to the clinical diagnosis of a fibrosarcoma. The clinical diagnosis was not infrequently suspicious of inflammatory carcinoma. The tumors are not bulky as seen in cystosarcoma phylloides but are large, usually "fist" size tumors. Nodes may be frequently palpable in the axilla but are almost always due to reactive hyperplasia.<sup>2,3,17</sup>

#### PATHOLOGY

The gross descriptions and the microscopic sections of the tumors available from John Gaston Hospital were individually reviewed and a number of interesting features were encountered.

Grossly, these tumors are firm and well demarcated from surrounding tissue but not encapsulated. Botham was aware of this "pseudo-encapsulation" and stated, "peripheral encapsu-

lation, which so frequently appeared grossly as a distinct feature, usually was found to be composed primarily of cells which constituted the primary tumor. There appeared to be concentrically arranged cells which were compressed and flattened." They may be round but lobulated and slightly irregular and lie in or next to the glandular structure. Early, they are not attached to the skin or the deep tissues and consequently can be rather easily "shelled out" in many instances. Pure sarcomas infrequently reach a huge size, in distinct contrast to malignant lesions which arise in the fibroepithelial enoplasms. On cross section it varies from grayish-white to grayish-red in color. It frequently has a necrotic, hemorrhagic cystic center and the tissue itself is described as having a "fish flesh" character.

Microscopically, the tumors present a so-called "school of fish" pattern with fusiform or spindle shaped cells lying in close apposition and forming strands that tend to stream in different directions, frequently interlacing. Cut transversely, these spindle cell elements are round and small and possess a nucleus that almost fills the body. On longitudinal view, the nucleus is relatively large and ovoid shaped with a well defined network of chromatin. Mitotic figures are present in varying amounts. The cytoplasm is acidophilic and extends out in spindle shape at each end of the cell. Blood vessels may be relatively frequent in the pattern. The arrangement of neoplastic elements about the blood vessels in some of these tumors caused a few authors to err and consider them angiosarcomas, or peritheliomas.<sup>18</sup> A new growth of blood vessels is formed to meet the requirements of some of these more rapidly growing tumors. The channels seem to be lined by a single layer of cells, which is all that separates the lumen from the tumor. They may show necrosis in the central portions with the tumor remaining viable only near a blood vessel. Vessels may be surrounded by masses of tumor which eventually finds its way into the lumen of the vessel, causing tumor emboli. The cellularity of the tumors varies considerably and may show areas of many cells with little stroma and vice-versa on special strains. Fibroblastic type cells may show marked metaplasia with formation of calcified areas and other markedly hyalinized areas. These are areas of osseous and chondrous metaplasia re-

spectively. The tumors are well demarcated from the surrounding tissue and present a pseudoencapsulation. The surrounding muscle fibers are compressed where the tumor is advancing. In other areas, the tumor breaks through the pseudoencapsulation of the surrounding muscle and infiltrates down into the fibers at deeper layers. The cells may infiltrate diffusely through adipose tissue. The tumor may lie close to the skin and compress the subcutaneous tissue or actually infiltrate the dermis. Many of these patterns may be found within a single tumor. Berg found there was much variation within individual sarcomas.<sup>17</sup> The microscopic features described should be enough to cause one to avoid only local excision for these tumors.

#### LYMPH NODE METASTASIS

Table 6 is a revision from a table in Adair and Herman<sup>2</sup> and it is a listing of breast sarcomas of all types with recorded lymph node metastasis by various authors since 1915. Geist noted the majority of his that had node metastasis were "round cell" sarcomas.<sup>3</sup> Some were also melan sarcomas. Even with the inclusion of these cases, out of 698 total cases there were only 21, or 3% of the total with lymph node metastatic disease. Table 7 is a list of fibrosarcomas of the breast in which the condition of the axillary nodes were recorded. Of 73 cases there were 4, or 5.4% which had metastatic disease in the axillary nodes. Oberman's case was noted to be by direct extension of the tumor.<sup>6</sup> Lerner's case was originally diagnosed as a round cell sarcoma but subsequently changed to a fibrosarcoma.<sup>19</sup> Some have theorized that lymphatic spread occurs only after the vascular route of spread is blocked with tumor.<sup>2</sup> Metastatic lesions of sarcomas are generally disseminated systematically by the blood stream.<sup>2-5,16</sup> This is consistent with our microscopic findings. Lymph node metastasis, then, may indicate spread of the disease beyond surgical bounds. It is of interest that of the four patients with node metastasis in Table 7, two succumbed to the disease in less than 14 months, one was alive with recurrent disease at 6 years and one was only 8 months post-operative when reported. This suggests a grave prognosis if the axillary nodes are involved. The incidence of the actual node metastasis by fibrosarcomas of the breast appears to be very low. In addition, the instances of positive node disease with fibrosarcomas of the breast are more likely to be re-

TABLE 6  
LYMPH NODE INVOLVEMENT  
IN BREAST SARCOMA

Author	Year	Cases	Cases With Node Metastasis
Geist	1915	435	13
Wright	1930	68	4
Sophian	1930	15	0
Schreiner	1932	7	0
Fox	1934	52	2
Rose	1936	15	1
Sailer	1937	15	1
Harrington	1940	9	0
Hill	1942	10	0
Rogers	1942	18	0
Adair	1945	30	0
Marshall	1946	9	0
Grimes	1953	15	0
TOTAL		698	21 3.0%

TABLE 7  
LYMPH NODE INVOLVEMENT IN  
FIBROSARCOMA OF THE BREAST

Author	Year	Cases	Cases With Node Metastasis
Schreiner	1932	3	0
Fox	1934	6	1
Boldrey	1936	4	0
Sailer	1937	3	0
Warren	1938	2	1
Harrington	1940	9	0
Rogers	1942	18	0
Stout	1942	3	0
Grimes	1953	9	0
Schottenfeld	1954	3	0
Berg	1962	5	0
Oberman	1965	6	1
Lerner	1965	1	1
Crocker	1969	1	0
TOTAL		73	4 5.4%

ported, as in Lerner's case, as node metastasis is thought to be very rare. This would tend to give an inaccurately high incidence of node metastasis in the collected cases. Even in face of this, the incidence could only be found to be 5.4%.

#### TREATMENT

A difference of opinion has existed over the years with regard to the extent of surgery required for attempted cure of breast fibrosarcomas (Table 8). As early as 1887 Gross recommended mastectomy and removal of the pectoral fascia.

As late as 1965 opinion was divided between Oberman, who recommended mastectomy and complete removal of the pectoral muscle, and Lerner, who advised radical mastectomy. Haagensen, in 1956, though he had only two cases in his book,<sup>18</sup> recommended but local excision. Though Berg stated no preference, he noted that radical mastectomy demonstrated no advantage over simple mastectomy. Only Boldrey and Schottenfeld felt that irradiation was beneficial.<sup>8,14</sup> Botham<sup>16</sup> recognized that sarcoma of the breast not containing a malignant epithelial element was adequately treated by mastectomy and excision of the underlying pectoral muscle.

A total of 49 cases (including the 5 reported herein) were selected from the literature because they contained some information regarding the initial treatment or final treatment (Table 9). Fox actually reported 42 cases, but information was so incomplete on most of them that only the 11 listed cases were included. These cases were tabulated in Table 10 with regard to the initial treatment and final treatment and insofar as possible, their outcome.

Surprisingly, the initial treatment in 20 of the 49 cases was only local excision. Some actually had more than one excision, as a case by Boldrey which recurred in two years after a local excision, to be locally excised again and then recur again in three years, after which she had a radical mastectomy and was well without recurrence. The first of our cases at John Gaston Hospital was locally excised in 1941, only to recur two years later. Again it was locally excised, to recur a year later. At that time the patient was six months pregnant and surgery was delayed until after delivery, at which time she had a simple mastectomy. This patient was last seen October 20, 1969, 28 years after her original local excision, well and without recurrence. In addition there were three patients who had nothing more than a local excision and were well 6, 7 and 15 years later. While some patients tolerated not only one, but multiple local excisions, others did not fare so well. There were 12 known recurrences in less than three years in this group, and the remaining five were lost to follow up. In the final treatment category those with only local excision dropped to 10, as many recurrences were treated with more extensive procedures.

A simple mastectomy was initially carried out in eight people, two of these had recurrences in

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TABLE 8

Local Excision	Mastectomy and Pectoral Fascia	Mastectomy and Pectoral Muscle	Radical Mastectomy
Haagensen (1956)	Gross (1887) Geschickter (1943)	Fox (1934) Rogers (1942) Adair (1946) Botham (1958) Oberman (1965)	Geist (1915) Deaver (1917) Cheatle (1932) Rose (1936) Boldrey (1936) Warren (1938) Marshall (1946) Grimes (1953) Lerner (1965)

TABLE 9

SELECTED CASES FROM THE LITERATURE

Author	Year	Number of Cases	Cases Selected
Schreiner, Thibaudeau	1932	3	II, III, VII
Fox	1934	11	16, 19, 21, 24, 25, 27, 30, 32, 34, 35, 36
Boldrey	1936	4	1 - 4
Sailer	1938	5	1 - V
Warren, Meyer	1938	2	Last Two
Hill, Stout	1942	5	16 - 20
Schottenfeld	1954	6	III, IV, VI, VIII, X, XI
Lerner	1965	1	1
Oberman	1965	6	3 - 6, 8, 9
Crocker	1969	1	1
Roberson	1970	5	1 - 5
TOTAL		49	

TABLE 10

Number of Cases	Recurrence Less Than 3 Years	No Recurrence 3 Yr. or More	Lost, Died P.O., or Less Than 3 Years Follow-Up
INITIAL TREATMENT			
Local	20	12	3
Simple	8	2	3
Simple with Pectoral Musc.	3	1	1
Radical	18	5	8
FINAL TREATMENT			
Local	10	1	3
Simple	11	2	6
Simple with Pectoral Musc.	3	1	1
Radical	25	8	7

less than three years, three were well after this period with no evidence of recurrence, and of the remaining three, one was well at one year and the other two were lost. In the final treatment category those having a simple mastectomy increased to a total of 11, as three of those originally having a local excision were subjected to the more extensive procedure. These three were added to the column of no recurrences, giving a total of six without recurrence after three years after having a simple mastectomy.

The three patients who initially had a simple mastectomy with removal of the pectoral muscle had no further treatment. None of those originally having a local excision were added to this group in the final treatment category. One of these patients had a recurrence in less than three years, one had no recurrence and died 12 years later with tuberculosis and one other patient was well after one year of follow up. The one patient having died after one year with this type procedure was the last performed case at the John Gaston Hospital, or case Number 1 in this reported series.

The initial treatment in 18 patients was a radical mastectomy, which was less than those initially having a local excision. Seven patients originally having a local excision were added to the final treatment group of the radical mastectomies for a total of 25 radical procedures. Approximately one-third of the patients initially having a radical mastectomy and one-third of those receiving this as a final form of treatment had a recurrence in less than three years. Another third in each group had no recurrence after three years and one patient in the final treatment group was well after two years, but a total of 10 had insufficient follow-up, were lost or had died shortly post-operative.

### DISCUSSION

Several points stand out in a review of all the information herein presented regarding fibrosarcomas of the breast. In general, they are rather slow-growing and may be present for several months to several years prior to initial treatment. However slow-growing, they are malignant and may be fatal. The malignant potential of the fibrosarcoma itself cannot be classified microscopically; however, it generally has a better prognosis than such tumors as lymphosarcoma, angiosarcoma or melanosarcoma, all of which tend to involve lymph nodes rapidly.<sup>2,14,20</sup> Most

investigators confirm that lymph node metastasis is unusual<sup>2,4,15,20,21</sup> and spread is usually via the blood stream to lungs, liver and other viscera.<sup>2,14,16</sup> In fact, Adair<sup>2</sup> states that lymphatic channels have not been described in sarcomas. For this reason the lymphatic spread of the disease with invasion of the lymph nodes, except in lymphosarcoma, melanosarcoma, and "carcinosarcoma", is necessarily a rare phenomenon. While to gross examination these tumors may appear encapsulated, it is actually a pseudoencapsulation presented by the nature of the tumor itself. The tumor is round and firm and tightly compact and expands into the surrounding tissue. Skeletal and adipose tissue are easily compressed but are also infiltrated at the edges of the tumor. Consequently, though the tumor may be easily "shelled out", many tumor cells are left behind in the adjacent tissues. Lymph node involvement appears to be quite rare from the total information available today. Lermer recommended radical mastectomy on the basis of his one case which had one positive node out of 40. This is not necessarily logical, as it is not the fact that carcinomas metastasize to nodes that makes radical mastectomy with axillary node dissection the treatment of choice. It is the fact that a 60% five-year cure rate can be obtained by that procedure. If node metastasis by sarcomas is an indication of generalized disease as suggested by some, then the radical mastectomy would be contraindicated.

With these considerations in mind, local excision can definitely be eliminated as effective treatment for these neoplasms. The benign appearance of the tumor and the ease with which it is "shelled out" has fooled a number of surgeons in the past. There should be no hesitancy in going ahead with a more extended procedure in the future when the frozen section report is fibrosarcoma, despite its ease of local excision. A simple mastectomy could be expected to have better results, particularly for those lesions which actually arise within the stroma of the breast. Of course it will be difficult, if not impossible, many times to determine if the lesion began in the stroma of the breast or actually in the fascia of the pectoralis muscle. For this reason the minimal procedure that can be expected to have the highest and most satisfactory cure rate would be a simple mastectomy with excision of the underlying pectoral muscle. Should there be any

doubt as to the depth of the tumor, the periosteum should also be excised. It is important in these neoplasms to have communication between the pathologist and the surgeon regarding the deep margins. Some will argue that there is very little addition to this procedure to include an axillary dissection. If the same cure rate can be obtained with the lesser procedure, however, the lymphedematous arm of the radical dissection can be eliminated.

The true value of axillary node dissection with these tumors cannot be determined without more cases on which to base an opinion. At present it does not seem warranted. As opinion remains divided, it is hoped that more cases will be reported in the future and another review can add more information to this point.

### SUMMARY

The case records of five patients with fibrosarcoma of the breast are presented from the University of Tennessee Institute of Pathology. Additional cases were collected from a literature review to gain insight into the nature of this lesion with regard to incidence, clinical picture, lymph node metastasis and recommended treatment. Presently, recommended treatment for such lesions is a simple mastectomy with wide excision of the underlying pectoral muscle.

### REFERENCES

1. Fox, S. L. Sarcoma of the breast. Ann. Surg., 1934, 100: 401-421.
2. Adair, F. E. and Herrmann, J. B. Sarcoma of the breast. Surgery, 1946, 19: 55-73.
3. Geist, S. H. and Wilensky, A. O. Sarcoma of the breast. Ann. Surg., 1915, 52: 11-21.
4. Hill, R. P. and Stout, A. P. Sarcoma of the breast. Ann. Surg., 1915, 52: 723-759.

5. Marshall, S. F. and Kennedy, R. J. Sarcoma of the breast. Surg. Clin. N. Amer., 1946, 26: 718-722.
6. Oberman, H. A. Sarcomas of the breast. Cancer, 1965, 18: 1233-1243.
7. Sailer, S. Sarcoma of the breast. Amer. J. Cancer, 1938, 31: 183-206.
8. Schottenfeld, L. E. Sarcoma of the breast. Am. J. Surg., 1964, 88: 229-242.
9. Schreiner, B. F. and Thibaudeau, A. A. Sarcoma of the breast. Ann. Surg., 1932, 95: 433-439.
10. Warren, S. J. and Meyer, R. Lymph node metastasis of sarcoma. Am. J. Path., 1938, 14: 605-619.
11. Werf-Messing, B. Van der and Unnik, J. A. M. van. Fibrosarcoma of the soft tissues: a clinicopathologic study. Cancer, 1965, 18: 1113-1123.
12. Crocker, D. J. and Murad, T. M. Ultrastructure of fibrosarcoma in a male breast. Cancer, 1969, 23: 891-899.
13. Smithy, H. G. Mixed malignancy of the breast: case report of a combined carcinoma and sarcoma in a child. Surgery, 1944, 16: 854-864.
14. Boldrev, E. B. Primary sarcoma of the breast. Canad. Med. Assoc. J., 1936, 35: 16-21.
15. Harrington, S. W. and Miller, J. M. Fibrosarcoma of the mammary gland. Surgery, 1940, 7: 129-132.
16. Botham, R. J., McDonald, J. R., and Clagett, O. T. Sarcoma of the mammary gland. Surg. Gynec. Obstet., 1958, 107: 55-61.
17. Berg, J. W., DeCrosse, J. J., Fracchia, A. A., and Farrior, J. Stromal sarcomas of the breast: A unified approach to connective tissue sarcomas other than cystosarcoma phylloides. Cancer, 1962, 15: 418-424.
18. Haagensen, C. D. Diseases of the breast. Phila: W. B. Saunders Co., Publisher, 1956.
19. Lerner, J. Fibrosarcoma of the breast: case report and literature review. Amer. Surg., 1965, 31: 196-199.
20. Rogers, J. and Flo, S. Sarcoma of the breast. New Eng. J. Med., 1942, 226: 841-844.
21. Grimes, O. F., Fenston, E. B., and Bell, H. G. Sarcomas of the breast. Surg. Gynec. Obstet., 1953, 99: 693-695.
22. Geschickter, C. F. Diseases of the breast. Phila: J. B. Lippincott Co., Publisher, 1943.



### Infectious Complications in Bone Marrow Transplant Patients

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Eleven patients received transplants of allogeneic bone marrow. Take of the marrow occurred in six patients. Nine patients developed infections. Six patients died, five of septicemia and one of *Pneumocystis carinii* pneumonia. Fifty individual infections occurred. Predisposing factors included severe underlying disease, long-term exposure to resistant hospital organisms,

heavy immunosuppressive therapy, and graft vs host disease. Gram-negative bacilli and *Candida albicans* were most common causative organisms. In all instances of septicemia identical organisms were isolated from the blood cultures and simultaneously obtained stool cultures. Infection with exogenous organisms frequently occurred in patients occupying conventional isolation rooms. Isolation of one patient for 45 days in a laminar-air-flow room prevented infection with exogenous organisms. Hospitalization of bone marrow transplant patients in laminar-air-flow rooms under strict isolation procedures is recommended.

# Junctional Rhythms: The Songs Of Loki\*\*

John E. Douglas, M.D.\*

Junctional arrhythmias may be slow or fast, they may be obvious or so obscure and disguised as to be unrecognizable. They may be sporadic, constant, a nuisance, life-threatening, and yet life-saving. They are ubiquitous. Indeed, junctional arrhythmias appear to possess all of the complex conflicting characteristics attributed to the major mischief maker in Norse mythology—the fickle, cunning Loki. Most of what we know about Loki comes to us in the eighth century legends LOKASENNA.<sup>1</sup> These myths tell of Odin, the chief Norse God; Thor, the mightiest warrior God; Freyja, the goddess of love; Balder, the God of Brotherhood; and Loki who was not a God, but was a “wish-son” or adopted son of Odin. Loki was a giant of questionable moral integrity, who had an “in” with the Gods. Loki usually dwelt in the elusive junctional zone between Asgard, the Norse equivalent of Olympus,

and the land of the Giants, ruled by Thrym. (See Figure 1A.) Thus Loki commonly served as an emissary between the Gods and Giants. The rhythms of the junctional tissue have many parallels in the deeds of Loki, and glimpses of both may facilitate better understanding of each.

First, let me attempt to define the general anatomic location of the tissue which I shall be calling junctional tissue. (See Figure 1B.) Much controversy reigns over whether or not this area is the junction of the atrium and the A-V node, the junction of the A-V node with the His bundle, or a more peripheral site. In fetal development, the His Purkinje system develops from the ventricular musculature and extends retrograde to merge with the simultaneously developing atrio-ventricular node.<sup>2</sup> Abnormalities in the joining together of these two embryonic struc-

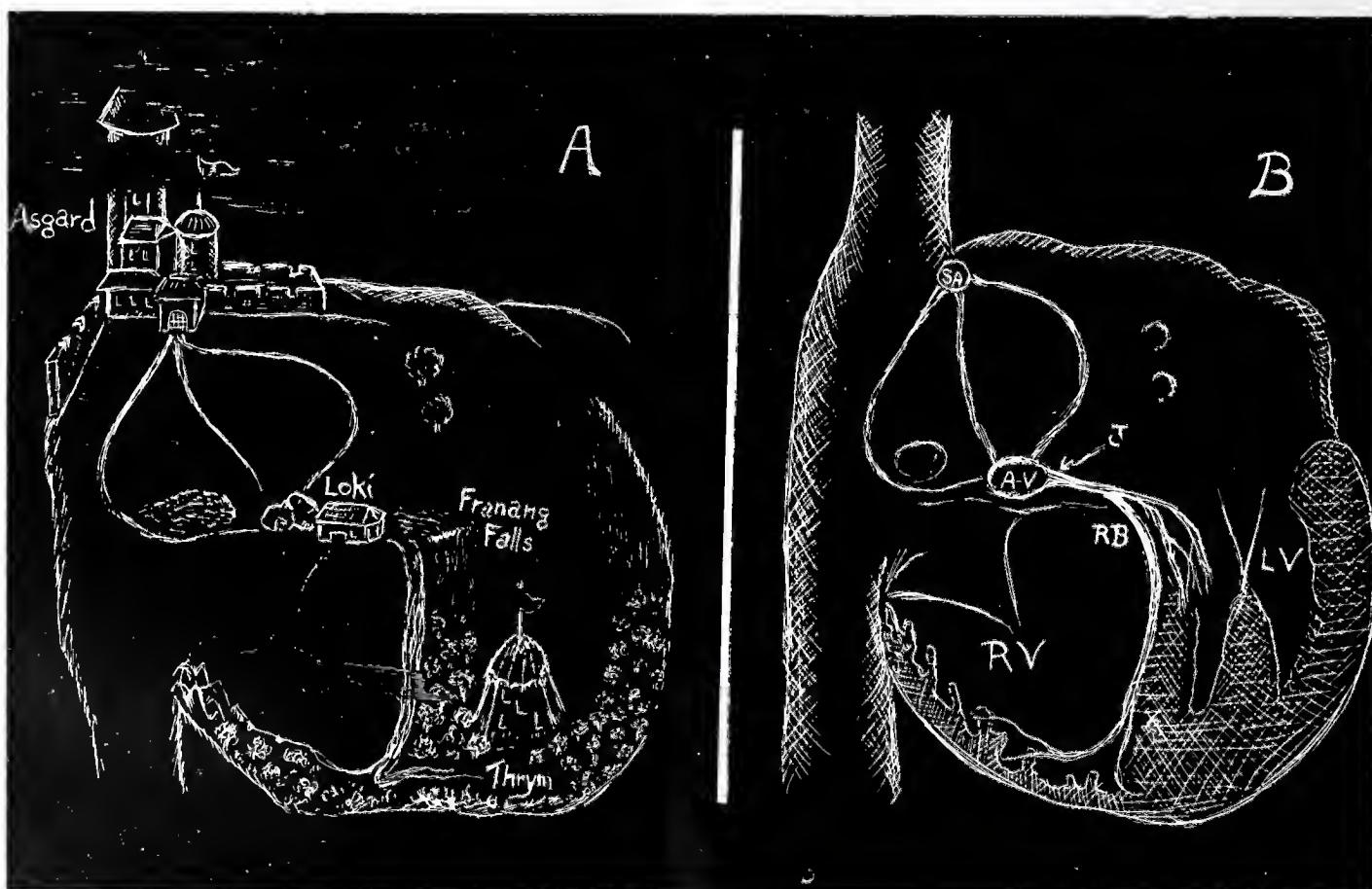


Figure Number 1A. Map of the realm of the Norse Gods and giants. Loki dwelt in the intermediate junctional land between Asgard, the home of the Gods, and the castle of Thrym, lord of the giants. Number 1B. Schematic diagram of the sino-atrial and atrio-ventricular conduction system of the heart. SA=sino atrial node which is linked to the atrio-ventricular node (AV) by at least three inter-nodal pathways. J=junctional zone between the A-V node and the His bundle. RB=right bundle; RV=right cavity of the right ventricle; LV=cavity of the left ventricle.

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tures result in lesions producing congenital complete heart block. On an embryologic basis I shall use the term "junctional" to indicate the area joining the His-Purkinje ventricular conduction system to the A-V node. This excludes such rhythms as "low atrial", coronary sinus, "high nodal", and "mid-nodal".

The junctional tissue is the major emissary between the atrium and the ventricle. When the sino-atrial node cannot meet its responsibility as the primary pacemaker for the heart, the junctional tissue frequently assumes this role, partially protecting the patient, until sino-atrial function returns or a pacemaker can be implanted.

Asgard, the home of the Gods, had been nearly wrecked in an earlier battle. The Gods commissioned a giant to rebuild it, promising him anything he would demand, if he could complete the job by a specified date. In a fit of devilment, Loki counseled his fellow giant to demand

Freyja, the Goddess of Love, the Sun and the Moon, as payment. The Gods were furious, but felt reassured that the giant could not complete the task by the specified date, thus giving them a means of evading such an intolerable price. The giant, however, had a magnificent stallion, Svadilfari, and with this horse's help, the work on Asgard progressed rapidly. To the Gods' consternation, it was all but finished the day before their contract expired. In panic and desperation they descended on Loki, demanding that he do something to get them out of the bargain. Whimsically, Loki changed himself into a mare and bewitched the giant's stallion. In this form, Loki led the stallion on a merry chase, the work on Asgard had to be suspended, the giant failed to meet his contract, and the Gods were rescued. Interestingly enough, some time later Loki gave birth to a colt.

The electrocardiograms shown in Figure 2 were obtained from a 62 year old black male

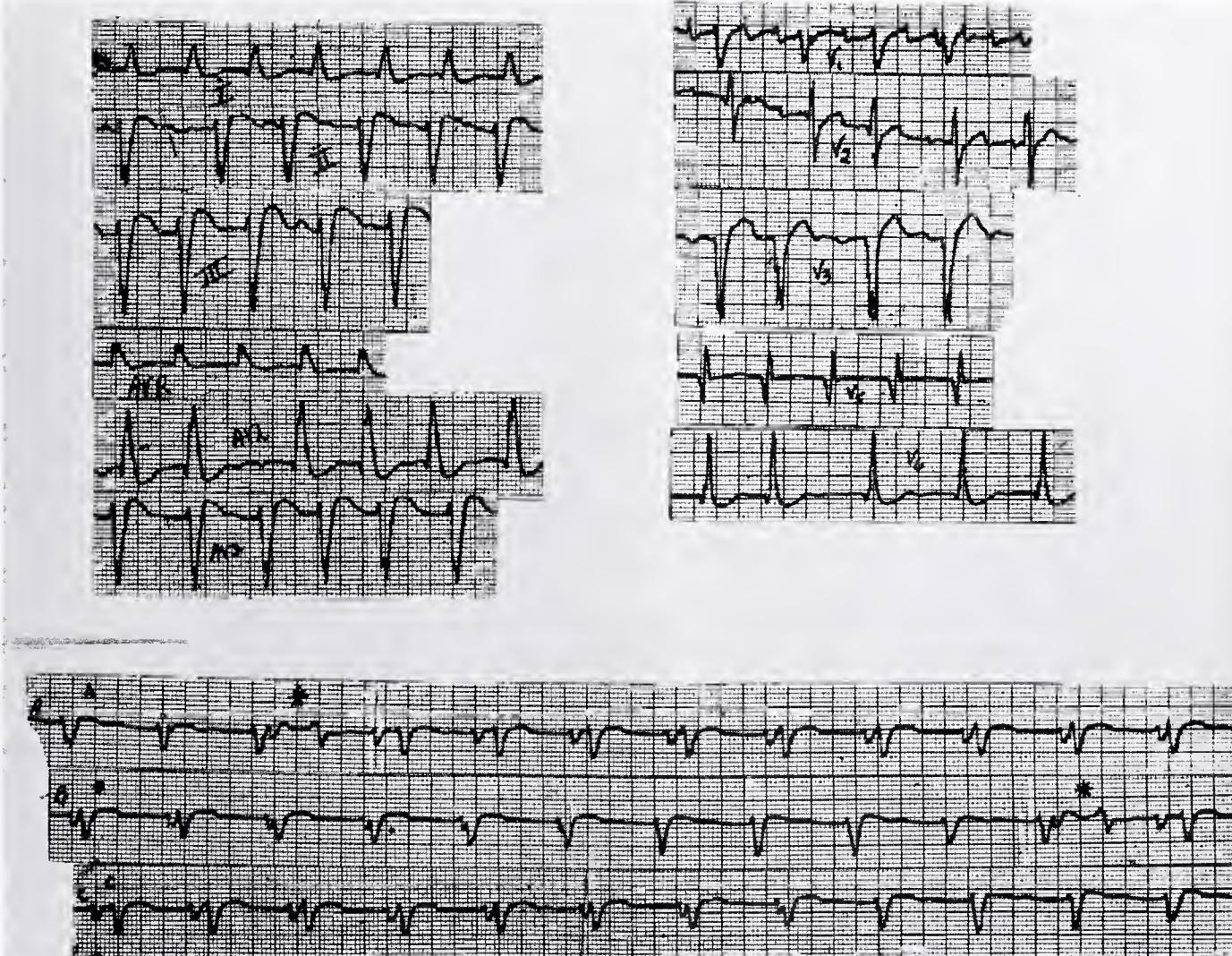


Figure Number 2.

Electrocardiogram obtained on 62 year old digitalized patient, whose rhythm was initially atrial flutter with a variable ventricular response. The three-strip continuous rhythm tracing below was obtained two days later, after stopping digoxin, and represents a type of associated A-V dissociation referred to as accrochage. The beats marked with asterisks represent atrial capture of the ventricle.

## JUNCTIONAL RHYTHMS: THE SONGS OF LOKI

with congestive heart failure, on Digoxin. His routine electrocardiogram showed atrial flutter at about 270/mm with a variable ventricular response, and left bundle branch block (LBBB). Two days later, following bed rest and diuresis his Lead II rhythm strip showed the unusual arrhythmia illustrated at the bottom of Figure 2. This is basically a junctional ventricular rhythm, interrupted only twice in this continuous tracing by atrial captures, indicated by asterisks. Note that although there is A-V dissociation, the P waves are always associated with the QRS waves—never appearing mid-way between the respective R waves, but always snuggled up to the right or left of the QRS complex, or fusing with it. This phenomenon is referred to as accrochage—meaning to mount, to ride upon one's back, as horseback riding. A servo-mechanism, operating through the carotid bulb and vagus nerve which innervates both the S-A and A-V nodes is thought to be the likely explanation for this arrhythmia.<sup>3</sup> Although Loki frequently got the Gods in trouble, he would usually save them by his cunning—frequently through unexpected transformations, and in the case of the giant's stallion, by accrochage.

Junctional rhythms are notoriously elusive, frequently unrecognizable. Their presence is commonly obscure and can only be detected by analyzing other electrocardiographic clues.

Loki's most heinous deed was conspiring, in a fit of jealousy, the death of the beloved God, Balder. Fleeing the wrath of the Gods, Loki hid in a mountain, making a house with four doors so that he could escape in all directions. He transformed himself into a salmon by day and hid in Franang Falls. To sustain himself, he discovered how to make fish nets. However, when the Gods approached his hiding place, he cast the net into the fire and leaped as a salmon into the stream. One of the more astute Gods discovered the ash made by the burning net and realized that it was a device for catching fish. Using this clue, the Gods fashioned a net of the same pattern, and when Loki tried to leap over the net, Thor caught him.

A 79 year old white female, who was in severe congestive heart failure with hyopkalemia, was treated twice daily with 40 mgm. Furosemide and 40 meg potassium choloride. On earlier electrocardiograms she had had a normal sinus

rhythm with a rate of 105/min, first degree atrioventricular block, and left bundle branch block. Because she gave no history of previous digitalization, 4 days prior to the V<sub>1</sub> rhythm strip shown in Figure 3 she received 1.0 mgm. digoxin intravenously. Over the next three days, she received another milligram of digoxin, and at the time of this tracing, her serum potassium was 4.1 meg/l.

What type of dysrhythmia is this? Like the Gods in search of Loki we must find a clue or net to ensnare the pacemaker mechanism. In the first score, the duration of the QRS complex is no more than 0.12 sec. and may be slightly less. The QRS configuration is not unusual and if there is any conduction disturbance, it is producing the small terminal R wave. This suggests that what conduction delay there is, is probably in the right bundle. P waves are visible, but are completely unassociated with the QRS complexes. In the second and third score, however, the configuration of the QRS complex is markedly deformed. Its duration is at least 0.16 sec. and it appears to represent left bundle

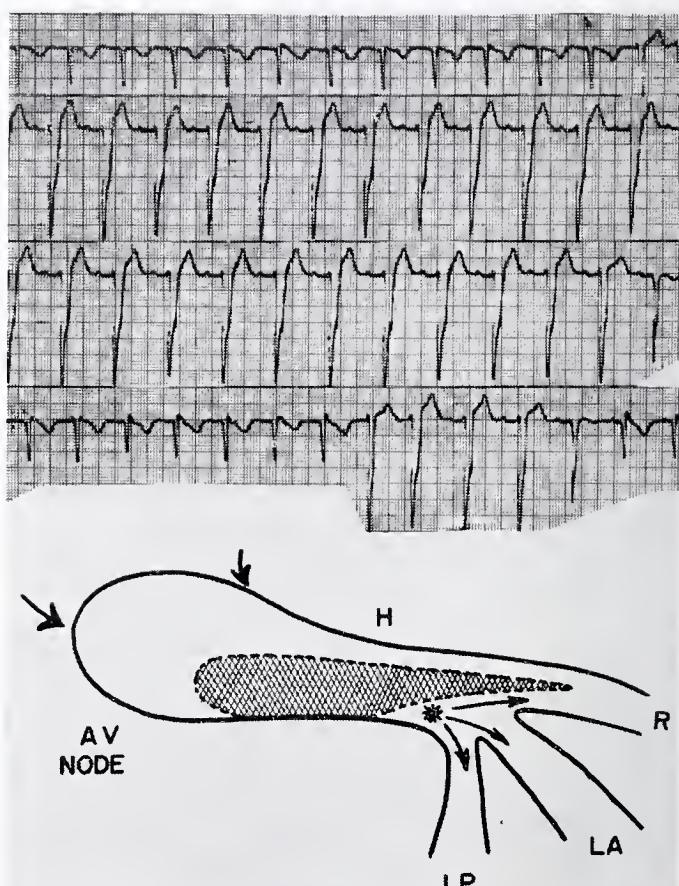


Figure Number 3.  
Continuous V<sub>1</sub> rhythm tracing from a 79 year old digitalized woman. The rhythm shifts between a junctional rhythm with normal QRS complexes, and a sino-atrial rhythm with first degree heart block and left bundle branch block. R=right bundle; LP=posterior fascicle and LA=anterior fascicle of the left bundle. See text for further discussion.

branch block. Indeed, comparing it with the patient's previous electrocardiograms wherein she had left bundle branch block, the QRS configurations were identical. Interestingly enough, however, each of these LBBB pattern QRS complexes is preceded by a P wave and what appears to be first degree heart block. The last complex in the third score is a little bizarre and represents a fusion or intermediate appearance between the previously described two QRS patterns. Thereafter the sino-atrial pacemaker abdicates to some other pacemaker which drives the ventricle as initially described. How is it that during a relatively slow sinus rate this patient demonstrates LBBB, but during what appears to be a faster junctional rhythm, no evidence of bundle branch block is present? If anything, the faster rhythm should be promoting bundle branch fatigue and bring out block, rather than relieving it. If there is LBBB, then how can shifting the pacemaker site from a sino-atrial focus to a junctional focus, still proximal to the left bundle, eliminate the LBBB? Has the mischievous Loki been at it again? I would say "yes", and he's selected the best hiding place possible which provides him escape in many directions. The schematic diagram in Figure 3 illustrates the probable mechanism for this patient's arrhythmia.

There is adequate evidence now in both animal and human hearts, for functional and anatomic separation of wave fronts pacing through the A-V node and common His bundle.<sup>4,5</sup> Thus left or right BBB can result from lesions impeding conduction through the pathways leading to the respective bundles. When this patient was in sinus rhythm, impulses heading to the left bundle were partially obstructed. When she was in a low junctional rhythm, there was no appreciable block between this pacemaker site, and the left bundle. Why the sheltering over-hang into the right bundle? This may represent extension of this patient's lesion into the right bundle, or merely represent functional block, permitting depolarization of the right bundle from a pacemaker site in the left, but impairing depolarization of the left bundle from activity in the right. Frequently it requires careful scrutiny of the electrocardiographic interrelationships to discover the clue that exposes the mechanisms of the Loki-ish elusive junctional rhythms.

The junctional tissue, because of its internal

inter-connecting, pathways, has the capacity for establishing a reentrant circuit. It may do this with or without participation of either the atria or the ventricles.<sup>6</sup> In this disguise, it is scarcely recognizable, though serving as the primary pacemaker for either or both the atriae and ventricles.

Thor's hammer, Mjollnir, was deemed by the Gods to be best of all precious works. However hard Thor smote, Mjollnir would never fail him. Thunder and lightning sometimes preceded its stroke. One morning Thor awoke to find his hammer missing.

"Great was his rage—Loki was told of his loss, and together they sought Freyja and borrowed her feather-dress. In this, Loki flew to Jotunheim, where Thrym, lord of the giants, sat—"How fares it with gods and elves; why comest thou alone to Jotunheim?" he cried to Loki. "Ill fares it with gods and elves," replied Loki, "has thou hidden Thor's hammer?" Thrym said it was hidden 8 miles deep, none would win it back, unless Freyja was given him as a bride. Back flew Loki to Thor with the tidings, and again, they sought Freyja."

Freyja furiously refused, and the gods met in council to decide how to recover the hammer. Thor was advised to disguise himself as Freyja, and go to the giant Thrym. Disdaining such unmanly conduct, Thor refused. However,

"Loki bade him be silent, for if Thor did not recover his hammer, the giants would soon dwell in Asgard.

"So the bridal veil was put on Thor—Loki attended him as a maid-servant and they sped to Jotunheim. Thrym bade a great feast be prepared and to his amazement, his bride to be, ate an ox, eight salmon, and all the dainties provided for the women. Loki interceded and explained that the bride had been fasting for eight nights in her longing for Jotunheim. Thrym, eager to kiss the bride, lifted her veil, but at sight of the fiery eyes, leaped back. Loki explained that for eight nights the bride had not slept, in her longing for Jotunheim.

"Then Thrym commanded that the hammer be brought to hallow the bride . . . Thor laughed inwardly and seizing the hammer (Figure 4) slew Thrym and all the giants . . ."

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Thus the disguises and council of Loki in this instance, brought order to Asgard and the gods.

Our next electrocardiographic example (Figure 5A) was obtained from an 81 year old patient, and is a junctional rhythm in a most ingenious disguise. The QRS complexes occur with a left bundle branch pattern. They have

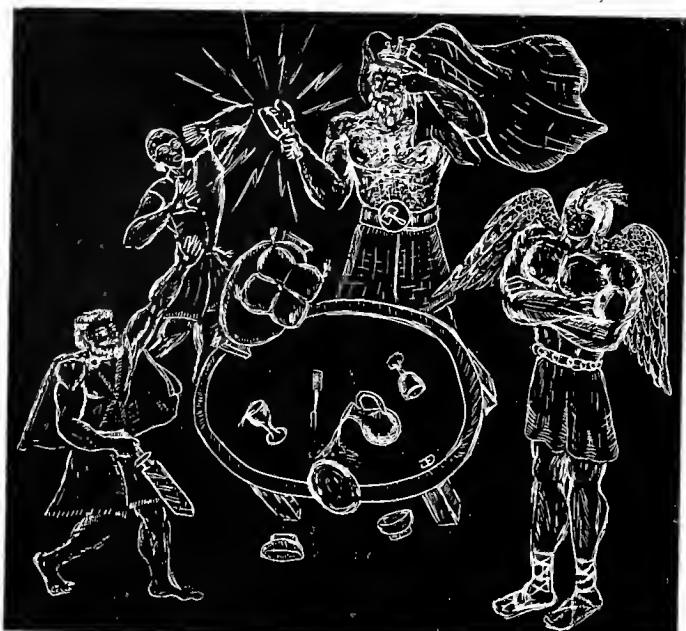
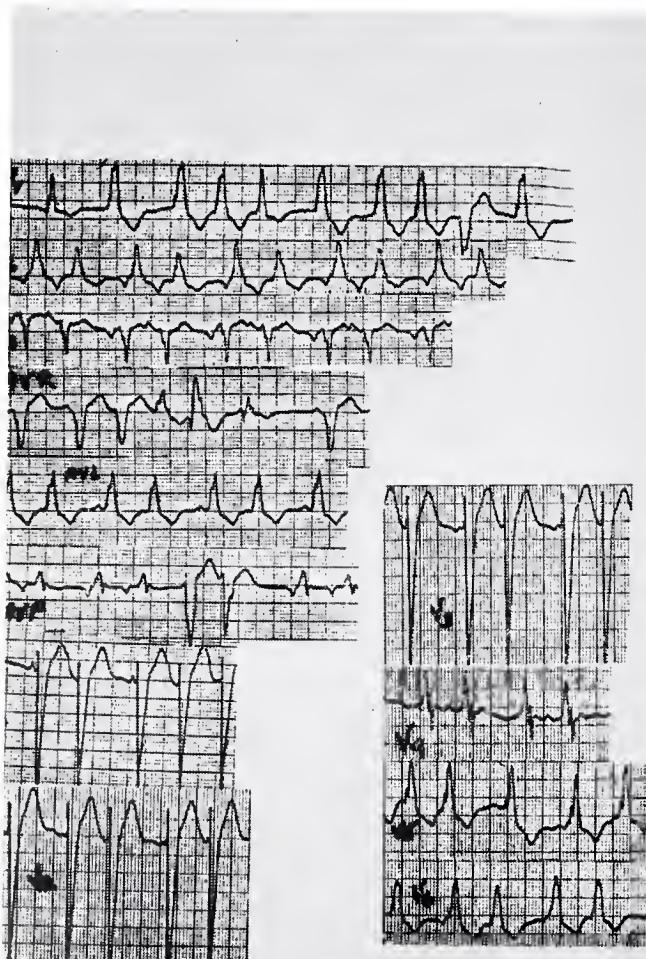


Figure Number 4.  
Thor, with the assistance and disguises of Loki, reclaims his mighty hammer Mjölnir from the giant Thrym.

irregular R-R intervals, and yet there is a basic recurring pattern in their irregularity. P-waves, when discernible, appear to have an abnormal, superiorly directed vector, as if being depolarized in a retrograde fashion. The PR interval varies, from being quite short—in the first of each couplet in Lead II—to being prolonged—the 2nd of each couplet. Following the second QRS complex, there is no P wave, or QRS complex at the appropriate interval. However, the next P wave occurs after an interval of exactly two cycle lengths that of the preceding P-P interval. Schematic analysis of this arrhythmia for Lead II is provided in Figure 5B.

The pacemaker is junctional, depolarizing the atrium in a retrograde fashion, and the ventricle, antegrade but with LBBB. In the second cycle, there is partial antegrade block, and following this there is a cycle of both antegrade and retrograde block. Thus, the junctional pacemaker fired, but the impulse failed to propagate to either the atria or the ventricles. Then the sequence repeated. Is this a reentrant rhythm, as schematized in the last two pairs of couplets? Although no techniques are available to prove



Electrocardiogram from an 81 year old patient having a junctionally tachycardia with antegrade and retrograde exit block. The lead II strip is analyzed with a ladder diagram. This probably represents a reentrant tachycardia, and for reasons discussed in the text, the reentrant circuit lies outside the major A-V conduction pathway, as in model II, rather than within it as in model I.

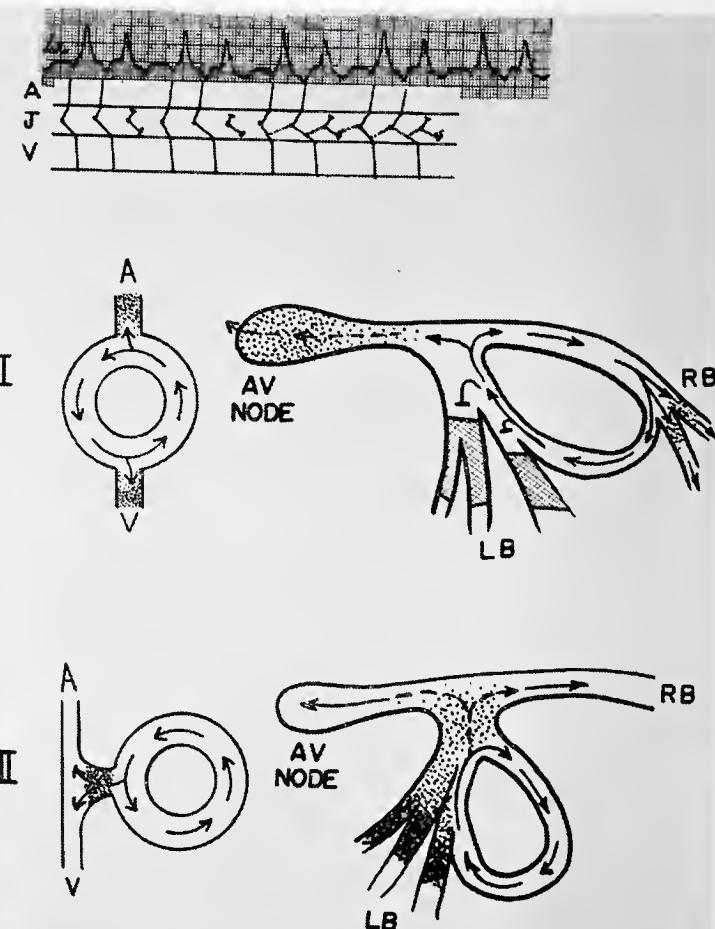


Figure Number 5.

this, it is quite probable. Not only this, but the reentrant loop must be outside the pathway to both the atria and ventricles. In other words, Model I does not adequately explain the observations. This model requires that conduction block occurs simultaneously in two anatomically separate pathways, and occurs in a way that does not disrupt the reentrant loop. Otherwise, we should have P waves without QRS complexes, or QRS complexes without P waves, and the re-entering cycle interval should change abruptly, and have to be re-instigated. The most acceptable model for this patient's arrhythmia then is Model II. Here the pacemaker is a reentrant cycle hidden in low junctional tissue possibly in the area of the left bundle. Impulses exit from the loop by a single pathway which bifurcates to depolarize the atriae in a retrograde fashion, and the ventricles antegrade. When block occurs in this single pathway, impulses fail to reach either the atriae or ventricles.

Loki, the emissary between the gods and giants, even when disguised, successfully directed Thor, while simultaneously dispelling Thrym's consternation at his alleged bride's behavior. Despite the apparent irregularities in bridal appetite and passion, and in electrocardiographic atrial and ventricular activation, Loki's song provided sensible order.

Our next example encompasses several of the features already noted in junctional rhythms. In addition, it illustrates some of the affects of the vagus nerve on junctional arrhythmias.

After capturing Loki in Franang Falls, Thor bound him and turned him over to the other gods. As punishment for his vile role in Balder's death, they fastened a venomous snake over Loki's face (Figure 6) so that, in what is virtually a neuro-secretory fashion, the snake's poison dropped on his face. Sigyn, Loki's wife, "he'd a shell under the poison, but when she drew it away full of venom, some drops fell (from the snake's vagus-like tongue) onto Loki's face. He then struggled so much that all the earth shook, and that is called an earthquake."<sup>1</sup>

The final ECGs were obtained from an elderly patient who was admitted because of a history of fainting spells associated with seizures. Her initial electrocardiogram showed A-V dissociation, third degree heart block, a slow junctional rhythm of 24/min and transient 3-5 second periods of junctional and ventricular arrest. On



Figure Number 6.

Loki's punishment for his role in Balder's death. Loki's wife, Sigyn, holds a shell to catch the snake's venom, thereby protecting Loki from the agony he endured whenever the venom struck his face.

one occasion, she arrested for a longer interval, probably from excessive vagal activity. Just as she began to have a seizure, she was resuscitated with a sharp blow to the chest. A transvenous pacing catheter-electrode was placed in her right ventricle and for the ensuing asymptomatic three days, she was artificially paced. At this time, while carefully monitoring her electrocardiogram, her pacemaker was turned off. Thereupon she had the arrhythmia shown in the first V-I rhythm strip in Figure 7. The QRS complexes occur at 1.24 sec. intervals, are 0.16 sec. in duration, and the first three and the last two beats are followed by P waves with an R-P interval of 0.20 seconds. Her fourth ventricular complex was a bit puzzling, but became more comprehensible after we figuratively held Sigyn's shell to catch the acetylcholine viper's venom, and literally gave her intravenously 0.5 mgm. atropine sulfate. The remainder of Figure 7 illustrates the continuous rhythm tracing which was obtained starting 40 seconds after the intravenous atropine. Initially there was no change in rate, though apparently normalized conduction through the ventricle occurred in several beats. Within 60 seconds the QRS configuration had virtually normalized, the R-R interval had decreased slightly, to 1.18 sec. and the R-P interval had decreased to 0.12 sec. Careful scrutiny of several of the intermediate forms is also helpful. The last QRS complex in strip A has a slightly

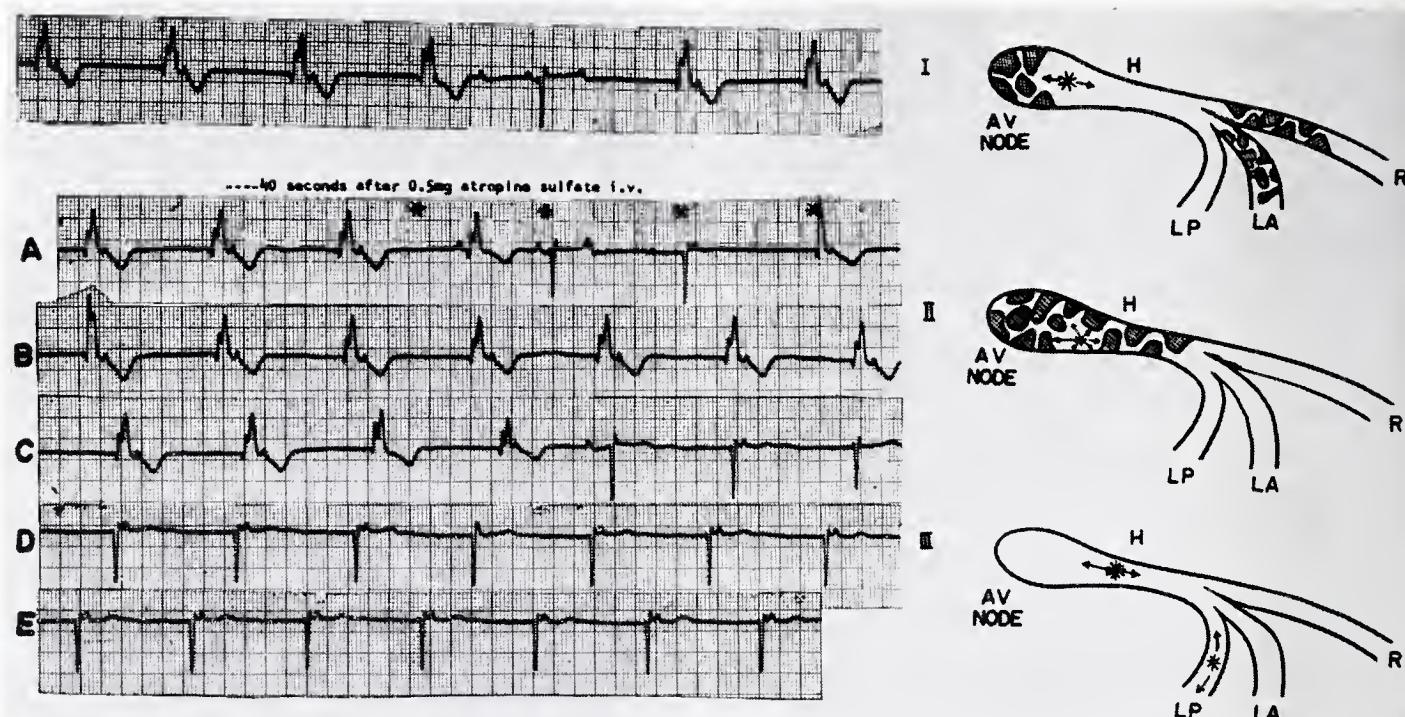


Figure Number 7.  
V<sub>1</sub> rhythm strip showing the spontaneous rhythm of a patient who previously had had Stokes Adams attacks and had been transvenously paced three days. The first tracing was obtained after the pacemaker had been turned off. The subsequent 5 rhythm strips are continuous tracing obtained starting 40 seconds after the patient received 0.5 mgm atropine sulfate intravenously. The three models which may explain the effect of atropine in this patient are also shown and are discussed in the text. H=region of His bundle. Other abbreviations are as in Figure Number 3.

abbreviated QRS duration, and the R-P interval is shorter—approximately 0.17 sec. duration. The fourth QRS complex in strip C is somewhat intermediate, and has an R-P interval of only 0.14 sec.

An explanation of this patient's arrhythmia must account for the simultaneous occurrence of 1) the conversion of the RBBB and left posterior fascicular block to normal ventricular depolarization; 2) the progressive reduction in the R-P interval; 3) the occasional, apparently chaotic occurrence of atrial beats; and 4) the slight increase in heart rate. The three different models depicted in Figure 7, may account for these changes. The first model implicates four physiologically depressed areas, the right bundle, the anterior division of the left, the upper A-V nodal area, and the pacemaker site. Atropine, by blocking the vagal depression, facilitated conduction in the three areas and accelerated the pacemaker site. Such a model has three major drawbacks. First, it requires synchronizing the affect of atropine so that it occurs simultaneously at the four different sites. Second, and probably of greater importance is the fact that recent evidence<sup>7</sup> indicates that, although acetyl choline may depress pacemaker activity and conduction in the A-V nodal area, it actually enhances conduction through the His-Purkinje system. If this is the

case, then atropine could be accelerating our designated pacemaker, and conduction through the upper A-V nodal region, but it should not have normalized ventricular depolarization if model I were the situation in our patient. Finally, model I does not provide an explanation for the periodic unexpected P-waves.

The first two reservations regarding model I are partially resolved by the changes shown in model II. Here the areas involved are all contiguous and are located in the region more likely to be depressed physiologically by vagal activity. This model, however, like the first, does not approach an explanation of the atypical atrial beats.

Model III does provide a means for grappling with all four problems. Prior to atropine the pacemaker was located in the posterior ramus of the left bundle. This produced abnormal and relatively late activation of the right bundle and the anterior ramus of the left. Further, to depolarize the atriae, the impulse had to travel the length of the upper His-Purkinje system. A higher pacemaker site suggested by QRS complex number five in the first rhythm strip, accelerated and competed more successfully after atropine. Thus the rate increased as conduction through the ventricle normalized. Further, the R-P interval diminished because of a shorter

distance between the pacemaker site and the atriae. Competition between the two pacemakers with interference of impulses in the retrograde pathway may help explain the premature or delayed atrial activation. For example, in the first rhythm strip shown after atropine, the fourth QRS complex is uniquely preceded by a P wave. If the high junctional pacemaker fired at the instant demarcated by the first asterisk, the antegrade path to the ventricle still may have been refractory. The retrograde path to the atriae, however, being only partially refractory allowed conduction to the atriae, though with extra-ordinary delay. The high junctional pacemaker fired again with less retrograde delay; fired again with a further reduction in retrograde conduction and then fired, fusing with the lower pacemaker's impulse producing the final complex in this rhythm strip.

Regardless of the model subtype we choose we are still confronted by a junctional rhythm, exquisitely sensitive to the affects of acetylcholine. In situations where a patient must rely on his junctional rhythm for any cardiac rhythm, it is imperative that we, like Sigyn, shield the junctional tissue from vagal secretions, lest we incur an earthquake.

A final analogy: Loki enjoyed feasts, but when inebriated, he commonly launched on drunken slanderous tirades—accusing the gods of cowardice, goddesses of adultery, Oden, of favoritism, and Freyja, of witchcraft.

Despite everyone's efforts to soothl, or quiet him, his harangue would continue as he would turn and confound those who would calm him. The feast would degenerate into a drunken fibrillating brawl, and Loki would not be silenced. Finally, Thor amidst thunder and lightning, wielding his famous electrified hammer, would be called upon to quell Loki. After three threats from Thor, Loki would become silent. The same is often true of junctional arrhythmias. Out of control, they are difficult to manage. Drugs, such as digitalis, may help, but may in turn compound the problem, aggravate the patient's condition, and may even be responsible for setting up the arrhythmia in the first place. Quinidine and pronestyl are usually not very helpful. If the junctional mechanism involves a reentrant loop, lidocaine, on occasion may accelerate conduction so that the circus mechanism catches its own tail. More than likely, however, it will merely facilitate the junc-

tional tachycardia at an even faster rate. Vagotonic maneuvers may accomplish some block, and if sufficient, may disrupt the reentry circuit, and terminate the tirade. If the patient's clinical status permits, however, it may be most feasible to pay major attention to other contributing problems and let time sober up the drunken tumultuous Loki. Though not as reliable as the lightning hurler, Thor, DC cardioversion may stop the tirade. If the underlying, precipitating event has been rectified, this maneuver may suffice.

Loki and junctional arrhythmias may be an ally, and yet an enemy; blunt or subtle, obvious or elusive, predictable or chaotic. Loki is hard to define, for he was not a god, and yet was usually counted among them. How does one classify junctional rhythms? Like Loki, they tend to stand alone. Loki's mischievous and enigmatic nature has puzzled and fascinated scholars of Eddic mythology for centuries. The same qualities of the junctional rhythms have captured our imaginations for several decades, and I am sure will continue to do so for many years to come.

#### Acknowledgements:

My deepest thanks to Dr. Donald S. Douglas for introducing me to Norse mythology, and to Mrs. Jean Jones for her assistance in the preparation of this manuscript.

#### BIBLIOGRAPHY

- MACCULLOCH, CJR, MOORE, GF: *The Mythology of All Races*. New York, Cooper Square Publishers, Vol. II, 1964.
- JAMES, TN: Cardiac conduction system: Fetal and postnatal development, American Journal of Cardiology 25:213-225, 1970.
- LEVY, MN; EDELSTEIN: The mechanism of synchronization in isorhythmic A-V dissociation. Circulation 42:689-699, 1970
- SPACH, MS; BARR, RC; SERWER, GS; JOHNSON, EA; KOOTSEG, JG: Collision of excitation waves in the dog purkinje system: Extracellular identification. Circulation Research 29:499-511, 1971.
- MYERBURG, RJ; NILSSON, K: Longitudinal dissociation in the distal A-V conducting system. Circulation 43-44 Suppl II:73, 1971.
- SCHUILENBURG, RM; DURRER, D: Further observations on the ventricular echo phenomenon elicited in the human heart: Is the atrium part of the echo pathway. Circulation 45:629-638, 1972.
- BAILEY, JC; GREENSPAN, K; ELIZARI, MV; ANDERSON, GJ; FISCH, C: Effects of acetylcholine on automaticity and conduction in the proximal portion of the His-purkinje specialized conduction system of the dog. Circulation Research 30:210-216, 1972.

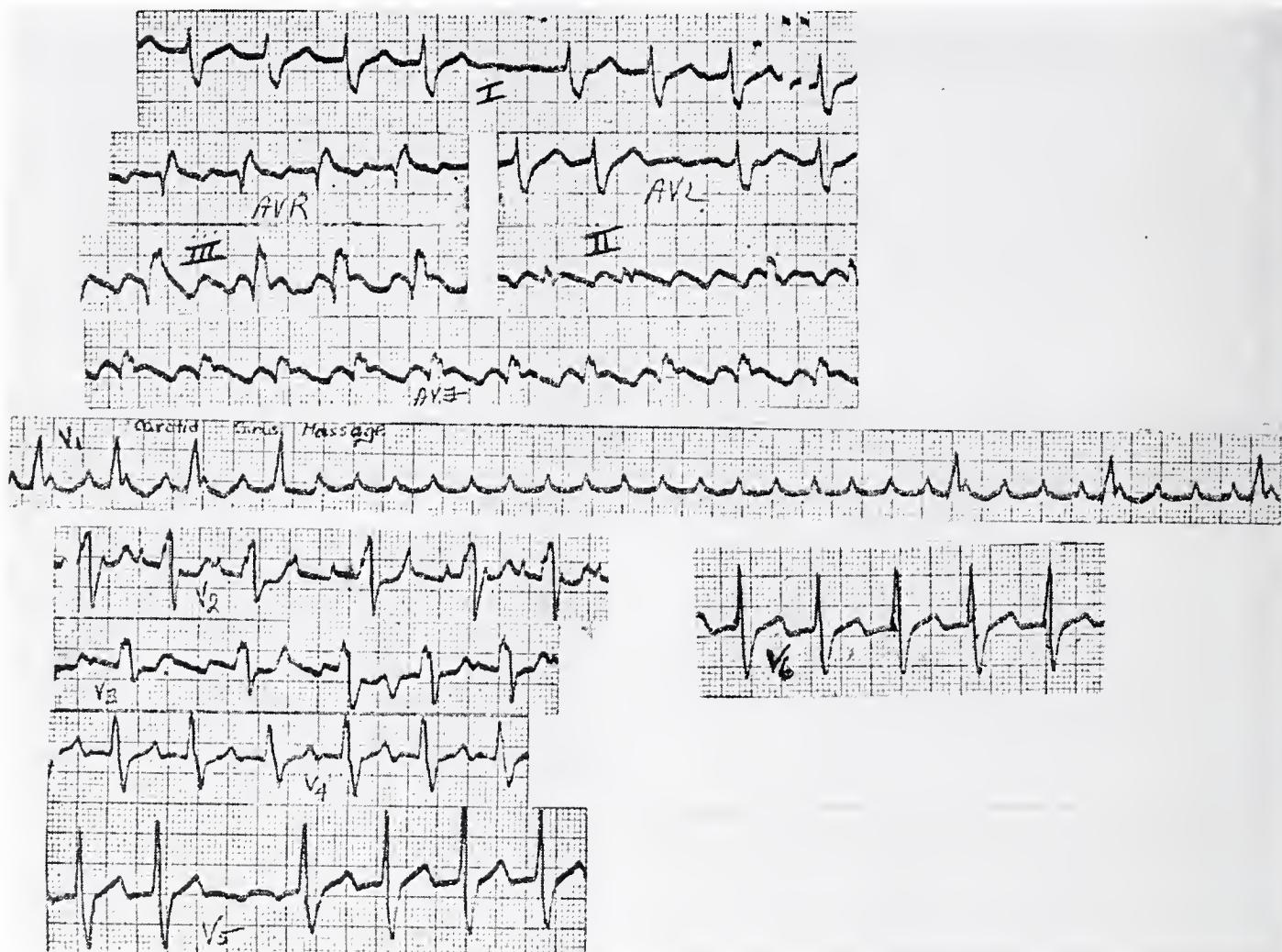
## ELECTROCARDIOGRAM

## OF THE MONTH



The Department of Cardiology, University of Arkansas Medical Center

See Answer on Page 277



EGC #21 49 year old white male with a history of rheumatic joint pains.  
He was told that he had mitral stenosis at the time of discharge from the army. On physical examination he has fixed split second sound and a right ventricular lift.

John E. Douglas, M.D., Assistant Professor of Medicine and Physiology

University of Arkansas Medical Center

4301 West Markham

Little Rock, Arkansas 72205



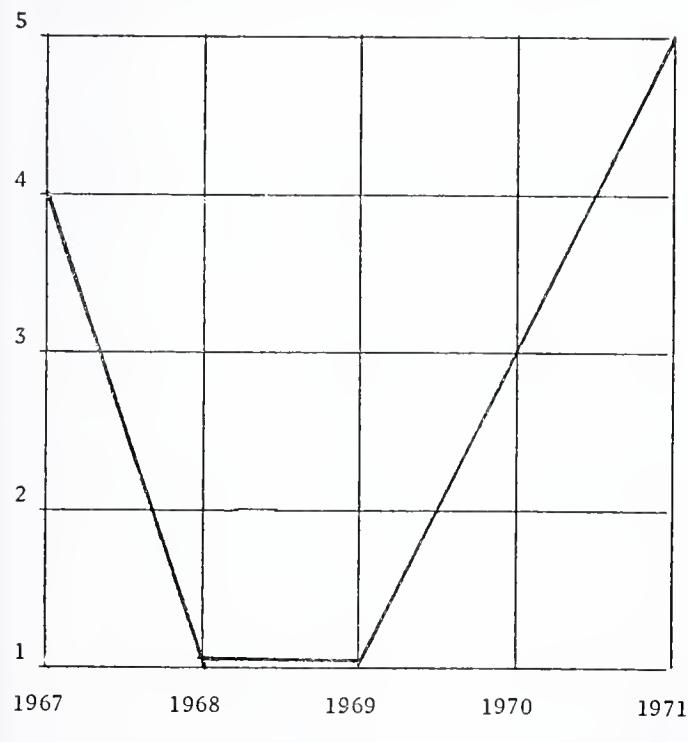
## Brucellosis Eradication—1975

Harvie R. Ellis, D.V.M.\*

Brucellosis in livestock, or undulant fever in man, has been one of the major recognized cattle and swine disease problems in the United States. A tentative goal of total eradication of brucellosis in cattle in the United States by December 1975 has been announced by the U. S. Department of Agriculture. According to the last report 20 states have attained a Certified Brucellosis-free status. All but five of the remaining states have a Modified-Certified status. Special treatment in investigation and management of brucellosis problem herds moved the program closer to its goal of total eradication.

A nationwide evaluation indicates that swine brucellosis is slowly decreasing and there is noticeable increase in the number of validated-free herds.

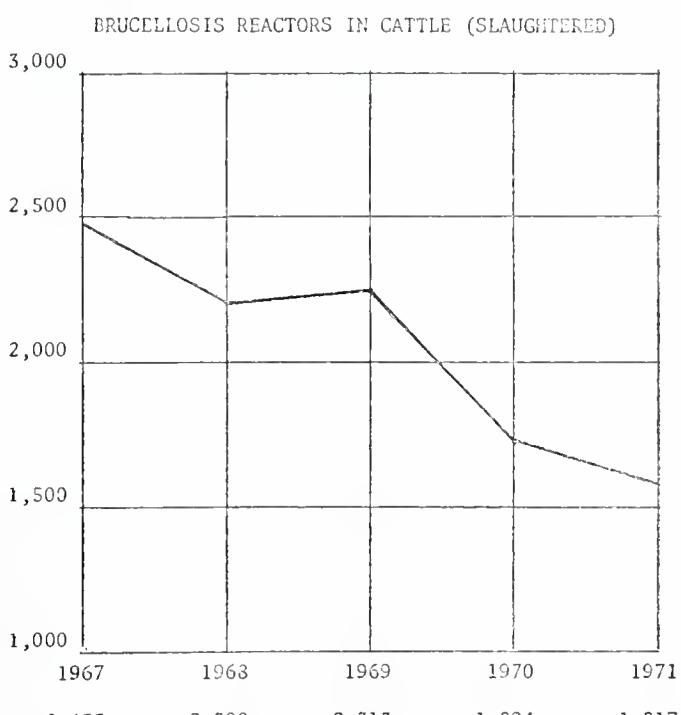
HUMAN BRUCELLOSIS IN ARKANSAS 1967-1971



Arkansas now has approximately 53 approved Certified-free counties with the remaining 22 counties being placed in Modified-certified status. In addition, Arkansas has 12 validated-brucellosis-free swine herds.

Brucellosis (undulant fever) is nationwide in distribution. However, 48 percent of the human cases from 1965-1969 were reported in four States (Iowa, Virginia, California and Texas). There are three types of *Brucella* organisms responsible for the infection in man and animals. They are, in decreasing order and frequency, *B.suis*, *B.abortus* and *B.melitensis*. Individuals most often infected are packing plant workers, livestock producers and veterinarians.

It is possible to acquire brucellosis by several modes of transmission. They are direct contact with infected tissue or secretions, ingestion, accidental inoculation and inhalation. The usual



\*Arkansas State Department of Health, 4815 West Markham, Little Rock, Arkansas 72205.

incubation period is 5 to 21 days, but may run into months. Brucellosis in the acute form often presents a prostrating febrile illness of abrupt onset. Chronic brucellosis can be very devastating to the patient and difficult to differentiate clinically from other disorders.

A definite diagnosis of brucellosis is made by culture of blood, bone marrow, lymph node, liver or cerebral spinal fluid. A titer of 1:320 or greater on an individual serum specimen may be considered conclusive of brucella infection.

However, it may not indicate a current infection. Suggested therapy for mild or moderate infections is tetracycline 500 mg. P.O.Q.U.I.D. for three weeks and for severe infections add streptomycin 500 mg. B.I.D. for fourteen days.

It is anticipated that Arkansas will attain Certified-free status by December 1975. The number of reported animal and human cases of brucellosis occurring in Arkansas for the past five years are presented in the accompanying charts.



## EDITORIAL

# Treatment of Diabetic Retinopathy by Photocoagulation

Morriss M. Henry, M.D.\*

**A** major health problem which is rapidly developing into one of the leading causes of blindness is Diabetic Retinopathy. When insulin was first discovered physicians believed the answer to this difficult disease had been conquered. Now, almost 50 years later, and even though our knowledge of the complex nature of diabetes mellitus has since advanced, we find diabetic patients showing frustrating deterioration of various organ systems, particularly the vascular system. One of the areas showing earlier clinical symptoms of this deterioration are the retinal blood vessels which bleed and often cause a diminution in vision and even blindness. The most likely candidates to

develop diabetic retinopathy are those patients who have had diabetes for a fairly long time, especially the juvenile onset diabetic who now has reached the late 20's or early 30's.

Changes that can be seen in the retina are small bulges or ballooning (microaneurysms) in the smaller vessels, hemorrhages, and neovascularization. Neovascularization is the most important in terms of visual damage and potential for therapy. If the neovascularization is allowed to run its course, repeated intraocular hemorrhages with loss of vision may result. Contracture of the new blood vessel growth may pull the retina off or cause retinal tears, leading to retinal detachment. The neovascularization may actually fill much of the interior of the eye.

In 1960 I had the opportunity to study in

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Essen, Germany under Dr. Meyer-Schwickerath,<sup>1</sup> the developer of the light coagulator or photo-coagulator. One day at lunch he mentioned he was treating diabetic retinopathy with photocoagulation on an experimental basis. Shortly thereafter a number of investigators began to do the same, among them Dr. Edward Okun and Dr. Paul Cibis of St. Louis and Dr. Paul Wetzig of Colorado Springs. Dr. Wetzig's article on the treatment of diabetic retinopathy by photocoagulation appeared in 1963<sup>2</sup> followed by Drs. Okun and Cibis' article in 1966.<sup>3</sup> Since then a great deal of experience has been gained by many investigators on the treatment of this disease over the United States.

The first photocoagulator in Arkansas was acquired by the Washington General Hospital in Fayetteville in 1964. Since I was using this photocoagulator I have had an opportunity to perform photocoagulation on a number of patients with diabetic retinopathy and watch the results over a number of years. The fact that this disease is quite variable, with exacerbations and remissions, makes evaluation of results somewhat difficult. However, it is the consensus of opinion of a number of ophthalmologists doing this work, myself included, that patients with proliferative diabetic retinopathy are often helped if the treatment is instituted soon enough and vigorously enough.

The best results seem to be obtained when large areas of the retina are destroyed by photocoagulation. The reason for this is not yet fully understood but a number of us believe a decrease in retinal circulation seems to bring about a decrease in the stimulus for new blood vessel formation. This in turn seems to reduce the occurrence of intraocular hemorrhages and fibrous glial tissue formation.

Early treatment of the diabetic patient, when the neovascularization first begins to appear, offers the best opportunity for retarding the progress of this very difficult disease. Frequent observations for reoccurrences is important, with some patients requiring quite a good deal of photocoagulation of the retina.

The important thing to remember is that the key person in this problem is the family physician who is treating the patient for diabetes mellitus. He or she should be aware of possible eye ground changes and complaints by the pa-

tient of ocular problems. When microaneurysms or retinal hemorrhages begin to appear, the diabetic patient should be referred to an ophthalmologist treating diabetic retinopathy. Not all patients are candidates for photocoagulation and the patient should not expect much improvement since photocoagulation is aimed primarily at maintaining vision and does not attack the cause of the disease.

It is still disputed as to whether poor control of diabetes has much effect on diabetic retinopathy, and not all who have had diabetes for a long time develop ocular changes severe enough to threaten vision. A great deal of statistical information on the effects of photocoagulation on the retina of the diabetic patient is in the process of being collected and should help us understand the problem better. Photocoagulation offers us a tool in retarding blindness but the underlying disease and how to prevent the deterioration of the human body have yet to be discovered.

1. Meyer-Schwickerath, G.: Personal Communication 1960.
2. Wetzig, P. C., and Worlton, J. T.: Treatment of Diabetic Retinopathy by Light-Coagulation, *Brit J. Ophthal* 47: 539-541, 1963.
3. Okun, E., and Cibis, P.A.: The Role of Photocoagulation in the Therapy of Proliferative Diabetic Retinopathy, *Arch Ophthal* Vol. 75, 337-352 March 1966.



#### ANSWER—Electrocardiogram of the Month

Atrial rate = 265/min.

Ventricular rate is variable, at about 100/min.

QRS duration = 0.12 to 0.13

QT = 0.40

During carotid massage the true atrial waves are more easily seen, and the varying block in atrio-ventricular conduction is apparent—explaining the pause in Lead I which otherwise might be confusing. This tracing emphasizes the necessity of checking to see if the true atrial rate is two, three or even four times the apparent atrial rate. Failure to make this check may lead to gross mismanagement of a patient's arrhythmia.

In addition to the arrhythmia—atrial flutter with a fast but variable ventricular response—this patient has right bundle branch block and left posterior fascicular block. Note the terminal slurring and slurring of the QRS complex, which is rarely present in right ventricular hypertrophy without some conduction disturbance. This patient did have an atrial septal defect, but without elevated pulmonary vascular resistance. Surgical closure of the defect was successful. The conduction abnormality persisted post-operatively, nonetheless. Conversion to normal sinus rhythm, however, was possible and persisted for at least one year of follow up.

## MEDICINE IN THE



### THE MONTH IN WASHINGTON

Congressional leaders have given national health insurance a high priority, but the new Congress convening this month may not act on it until late this year or even next year.

Senate Democratic Leader Mike Mansfield of Montana assigned the legislation "the highest priority" and expressed confidence that a national health insurance program will be approved during the next two years by the 93rd Congress.

The key congressman on this legislation, Rep. Wilbur D. Mills (D., Ark.), chairman of the House Ways and Means Committee, has described the 93rd Congress as moving "to fashion a national health insurance program which the great bulk of Americans can support."

The three major national health insurance bills before the Congress will be the Nixon Administration's proposal financed by employer-employee contributions, the American Medical Association's Medicredit plan and legislation sponsored by Sen. Edward M. Kennedy (D-Mass.).

The Ways and Means Committee acts first on such legislation and it had been expected to take up tax reform and possibly pension plan legislation before national health insurance. This would have deferred national health insurance for at least several months. But the time-table has not been definitely set and Mil's recently indicated that tax reform might be given a lower priority.

Another piece of legislation of major importance to the medical profession that will be before the 93rd Congress deals with health maintenance organizations (HMOs). The Senate last year approved a bill authorizing a broad HMO program and the House Health Subcommittee approved a much more limited program.

Democrats remain in control of Congress and the key congressmen on health care legislation will continue to be Mills; Kennedy, chairman of

the Senate Health Subcommittee; Rep. Paul G. Rogers (D.-Fla.), chairman of the House Health Subcommittee; and Sen. Russell B. Long (D-La.).

Both the Ways and Means Committee and the Senate Finance Committee held extensive hearings on national health insurance during the 92nd Congress but the legislative process must start anew because all pending bills die automatically at the end of a two-year Congress.

Medicredit, slated for early introduction, is being expanded to include home care and limited dental benefits. In the 92nd Congress, Medicredit had 174 sponsors, by far the largest number for any national health insurance legislation.

Kennedy, with the support of organized labor, sponsored the most costly plan in the 92nd Congress. It also called for extensive re-organization of the nation's health care delivery system with the government having a dominant role. At this writing, he had not disclosed any details of his new bill.

He and Mills have conferred on national health legislation to see if they could agree on a program. In a recent speech, Kennedy said that Mills "and I plan to jointly introduce such legislation early next year (1973)." But Mills has not gone quite this far, at least in his public statements. Last fall Mills said of his talks on the matter with Kennedy:

"We found wide areas of agreement. But obviously there were key areas where we did not—particularly in the financing and administrative areas. It may be that as we continue to discuss these areas further agreement can be made. I think I will be able to convince him that reliance on the federal treasury and the federal bureaucrat is not the best way to accomplish our common objectives."

\* \* \* \* \*

The Bureau of Narcotics and Dangerous Drugs has proposed restricting sales of nine barbiturates which were described as highly addictive.

tive and linked to 1,771 suicides and deaths in 17 months.

The Bureau said the barbiturates are more dangerous than heroin.

"Withdrawal from the use of these drugs can be fatal and, in many instances, withdrawal symptoms are more severe from a barbiturate habit than from heroin addiction," BNDD Director John E. Ingersoll said.

He identified the barbiturates by their generic names as amobarbital, butabarbital, cyclobarbital, heptabarbital, pentobarbital, probarbital, secobarbital, talbutal and vinbarbital. He listed only five brand-name drugs: seconal (secobarbital), tuinal (amobarbital and secobarbital), amyntol (amobarbital), nembutal (pentobarbital) and butisol (butabarbital).

The BNDD Director asked the Food and Drug Administration to place the nine barbiturates under the same controls for cocaine, morphine, codeine, methadone and amphetamine.

\* \* \* \*

W. B. Barclay, M.D., assistant executive vice president of the American Medical Association, said that the AMA reserves the right to reject drug advertising even if it conforms to Food and Drug Administration regulations.

He said the AMA had accepted the FDA's authority as to drug advertising when it was promulgated in 1968 "after determining that the regulations would provide adequate screening and furthermore would have the advantage of being consistently applied to all medical publications, not just AMA journals."

However, Dr. Barclay added, the AMA reserved the further right of rejection, not only as to drugs but to other products too, "if the proposed ad is judged to be in poor taste, if the layout would cause confusion with the editorial content of the journal or if the ad is for a product, service or book which is not covered by FDA regulations and which in AMA's opinion does not meet our standards of acceptability."

Dr. Barclay said the impact of advertising on drug prescribing, use and misuse is not known.

"No scientific data has been developed on this question, and no reliable method has been proposed to acquire such data," Dr. Barclay said. "Ads placed in scientific journals reach a well educated, well informed and broadly experienced audience that has access to many sources

of scientific information. Since all material in such ads has been judged by FDA to be correct and accurate it is difficult to see how such advertisements could adversely affect prescribing practices. In spite of the plethora of information available to physicians, AMA has developed and distributed without charge to its members its own evaluation of drug products. This book is titled *AMA Drug Evaluations* and is usually referred to as "ADE". Unfortunately, we are in no better a position to judge the impact of this book than we are to judge the impact of advertising or editorial copy in our journals."

Dr. Barclay outlined the AMA's position at a public hearing of the National Council of Churches.

\* \* \* \* \*

The Department of Health, Education and Welfare has ended a 40-year study of the effects of untreated syphilis among a group of black men in Alabama.

Assistant HEW Secretary Merlin K. DuVal announced the end of the Public Health Service study after receiving an investigatory report from a HEW-appointed citizens' advisory board.

When it began in 1932 in rural Alabama, the study involved more than 400 black men with syphilis and another 200 who did not have the disease and were used for comparisons. Of the 125 survivors, 50 were in the nondiseased control group.

In its report to DuVal, the panel said, "No convincing evidence has been presented to this panel that participants in this study were adequately informed about the nature of the experiments, either at its inception or subsequently," and added:

"The U.S. Public Health Service from the onset of the study has maintained a continuous policy of withholding treatment for syphilis from the infected subjects. There was common medical knowledge, before this study, that untreated syphilitic infection produces disability and premature mortality."

"The study of untreated syphilis in black males in Macon County, Ala., now known as the Tuskegee Syphilis Study, should be terminated immediately," the panel said.

Autopsies to determine the effects of untreated syphilis were discontinued several months ago.

During the experiment at least 28 men are known to have died of syphilis.

\* \* \* \*

The General Accounting Office, Congress' watchdog on federal spending, issued a voluminous report on the nation's health care system with recommendations that it estimated could save several billions of dollars annually.

The basic recommendations were for better construction, design and planning, better usage of health care facilities, and more emphasis on preventive medicine and group practice.

The year-long GAO study was commissioned by Congress originally to survey the Hill-Burton hospital construction program. The Senate Labor and Public Welfare Committee later asked the GAO to expand it to include all aspects of health care.

Reduction of hospital stays and more emphasis on out-patient treatment are essential, the GAO said. It was recognized that the health insurance coverage of out-of-hospital care has been increased, but the GAO said that "a large number of people still lack this coverage because they cannot afford to spend more money on health insurance." The American Medical Association, Blue Cross and Blue Shield were reported as favoring further increases in out-patient coverage.

One out of four patients was reported to receive more hospital care than necessary. The report said that reducing hospital stays an average of one day would in effect add 96,000 beds to the nation's hospitals. It was estimated that putting patients needing long-term care, as opposed to acute, in special facilities would not only be less expensive but would make available 126,000 beds in general hospitals. Expansion of home health care programs would reduce the need for 20,000 hospital beds the report said. Sharing of services by regional groups of hospitals could increase efficiency. For example, the 90,000 hospital beds allotted to obstetrics could be reduced by 38,000.

The report also said sharing of services also could cut demand for new hospital facilities for such procedures as open-heart surgery, radiation therapy and kidney dialysis. The GAO investigators found that of 416 hospitals equipped to do open-heart surgery in 1969, 97 per cent used them less than four times a week. Pediatric

and emergency services also offer sharing possibilities, the study said.

The study concluded that alternate health-care systems such as prepaid group practice, foundations for medical care and health maintenance organizations "may offer significant savings." The report said that such groups generally use at least 20 per cent fewer hospital days per 1,000 patients than traditional care.

The planning of health care was criticized as disorganized.

"Less than 50 per cent of the 163 health planning agencies responding to our inquiries about health facility needs provided data showing that they had knowledge of 1972 needs for various types of inpatient, extended and ambulatory care facilities and beds," the report said.

The GAO cited union wage increases beyond productivity increases and so-called feather-bedding practices as major factors in rising hospital construction costs.

The AFL-CIO Building Construction and Trades Department, in a letter to the GAO included in the report, said the GAO had been "grossly misleading and deductively backward," contending that productivity in the construction industry was far outstripping wage gains.

The GAO said labor and industry must act if costs are to be held down. It said contractors who try to fight strikes "have been pressed by project owners to settle quickly to complete construction. Any increases in wages agreed to by contractors are generally passed on as increased costs to owners on future projects."

\* \* \* \*

Government scientists believe they have found the cause of intestinal flu, the ailment that frequently sweeps through a community or an office causing 24 to 48 hours of nausea, vomiting, diarrhea and abdominal cramps in its victims.

They call it "Norwalk agent."

Doctors have generally called the disease acute infectious non-bacterial gastroenteritis because a specific cause had not been identifiable. The ailment is not to be confused with the sometimes deadly influenza which occasionally cause international epidemics.

Scientific investigators for the National Institutes of Allergy and Infectious Diseases, working from a 1968 outbreak of the disease in Norwalk, Ohio, and using the latest techniques in

scientific photography, claim to have captured the elusive "Norwalk agent" on film.

\* \* \* \*

Frank J. Rauscher, Jr., M.D., director of the National Cancer Institute, says that "some very important progress is being made" in cancer research and that the day soon may come when a single drop of a person's blood will be tested to diagnose the disease.

"In fact, I would say that our knowledge of cancer—what causes it, how it can be prevented, how to spot it in early stages, and how to treat it—has advanced more in the last two years than in the previous 50," Dr. Rauscher said.

He made his prediction in a copyrighted interview published in U.S. News & World Report.

But he predicted that in 1973 about 645,000 new cases of cancer will be discovered in the United States and that 350,000 Americans will die from the 100 or so forms of the disease.

Rauscher said from 300 to 400 institutions were grappling with the problems of cancer and that they were making "tremendous strides". He estimated the total being spent each year, both public and private, at \$750 million.

Elsewhere on the cancer research front:

Seven American cancer scientists went to Russia and for two weeks exchanged information on cancer viruses with leading Soviet scientists in the U.S.S.R. The exchange was part of the U.S.-U.S.S.R. health agreement to share research results from cancer, heart disease and environmental studies which was signed in Moscow in May, 1972, during President Nixon's summit meeting. As part of the exchange agreement, the U.S. scientific delegation will present to Soviet scientists 31 strains of cancer viruses affecting chickens, cats, rodents, and non-human primates, as well as a possible human tumor virus from a muscle cancer. James F. Holland, M.D., a specialist in treating cancer by drugs, has been named to work in the Soviet Union for one year to help carry out the new U.S.-U.S.S.R. program.

—A multi-disciplinary cancer research program will be established at the Weizmann Institute of Science in Rehovot, Israel, under a \$447,000 research contract awarded by the National Cancer Institute. Several research topics will be investigated, including the roles of various white

blood cell populations in the body's defense against cancer, and methods that may induce leukemia cells to mature normally. Attempts also will be made to further develop tests that offer hope for early cancer detection and diagnosis.

\* \* \*

### Health Care Speeches

The faculty of the University of Arkansas School of Pharmacy is assisting the Arkansas Regional Medical Program by developing several speeches for the general public concerning health care. Each of the twelve health care speeches is concerned with drugs and diseases, and is designed so that a physician, pharmacist, dentist, or other health professional, can read the prepared text in 20-25 minutes. There is no charge for the use of the prepared speeches or background information. For more information contact: Director, Cooperative Health Education Program, School of Pharmacy, University of Arkansas Medical Center, 4301 West Markham, Little Rock, Arkansas 72201. Telephone 664-5000, Extension 221.



### Clergy-Medical Seminar to be Held

A Clergy-Medical Seminar is scheduled for April 26, 1973, with sessions being held from 9:30 A.M. to 3:30 P.M. at the Veterans Administration, North Little Rock, and from 7:30 P.M. to 9:30 P.M. at the Second Baptist Church in Little Rock. Dr. Kenneth Pepper, Director of Pastoral Counseling and Education Center, Dallas, Texas, will be the guest speaker and will chair panel discussions after each lecture. The sponsoring organization encourages physician participation in the seminar and invites all physicians to attend.



## PERSONAL AND NEWS ITEMS

### Dr. Redman Appointed

Dr. John F. Redman has been appointed head of the Division of Urology at the University of Arkansas School of Medicine. Dr. Redman joined the Medical School Staff in 1968 as an instructor in urology and served two years in the Air Force, returning as an assistant professor in 1970.

### Dr. Thicksten Named Charter Fellow

Dr. Jack N. Thicksten of Alma has been named a Charter Fellow of the American Academy of Family Physicians and he has received the Charter Fellowship degree.

### Dr. Young Elected to AAFP

Dr. J. Hosea Young of Wynne has been elected to active membership in the American Academy of Family Physicians.

### Dr. Long Reappointed

Dr. C. C. Long of Ozark has been reappointed to the American Medical Association's Council on Rural Health for a one year term.

### Physicians Elected

Physicians who have been elected to head staffs of the following hospitals for 1973 are:

*Osceola Memorial Hospital, Osceola:* Dr. L. D. Massey, chief of staff.

*St. Bernards Hospital, Jonesboro:* Dr. Durwood Wisdom, chief of staff; Dr. Francis M. Wilson, vice-chief; and Dr. Donald Berry, secretary-treasurer.

*Rebsamen Memorial Hospital, Jacksonville:* Dr. Thomas H. Wortham, chief of staff; Dr. Roland D. Fewell, chief-elect.

*St. Joseph's Hospital, Hot Springs:* Dr. Stuart B. McConkie, chief of staff; Dr. Driver Rowland, vice-chief and chief-elect; Dr. Gary Meek, secretary. Section chiefs elected are Dr. Leeman King, medicine; Dr. Ronald Bracken, surgery, and Dr. Deno Pappas, obstetrics and gynecology.

### Dr. Logue Coordinates Aid

Dr. Richard M. Logue of Little Rock was requested by the regional CARE office in Kansas City to coordinate Statewide efforts to aid victims of the recent earthquake in Managua, Nicaragua. Dr. Logue began working with CARE in 1964, when he practiced orthopedics for a month in Jordan under the auspices of

Medico, CARE's international medical help organization.

### Physicians Locate

Dr. Robert B. Nisbet has joined the staff of the Millard-Henry Clinic in Russellville. Dr. Nisbet specializes in obstetrics and gynecology.

Dr. Amal Olaimey has joined the staff of Mercy Hospital in Brinkley. Dr. Olaimey will have a clinic on the first floor of the hospital and he will be in charge of the hospital emergency room.

### Dr. Kirk Appointed

Dr. Marvin N. Kirk of Benton has been appointed Medical Examiner for Saline County. He served as county coroner for the past two years. Dr. Kirk's duties as Medical Examiner will involve the investigation of unexplained deaths, homicides and suicides.

### Dr. Webb Relocates

Dr. Lewis A. Webb has closed his clinic in Dardanelle and has moved to Conway. Dr. Webb will commute to Little Rock where he will be on the staff of the Veterans Hospital.



## PROCEEDINGS OF SOCIETIES

### Baxter County Medical Society

Dr. Doyle O. Kinder of Mountain Home has been elected president of the Baxter County Medical Society for 1973. Other new officers include Dr. John F. Guenther, vice president; Dr. Ben N. Saltzman, secretary-treasurer; Dr. Carolyn Wilson, delegate; and Dr. Arthur Beard, alternate delegate.

### Pulaski County Medical Society

Dr. Winston K. Shorey will serve as president of the Pulaski County Medical Society for 1973.

Other new officers are: Dr. Purcell Smith, Jr., president-elect, to take office in 1974; Dr. Curry Bradburn, vice president; Dr. William N. Jones, secretary; Dr. John Watkins, treasurer; and Dr. James Weber, treasurer-elect.

### Washington County Medical Society

The Washington County Medical Society has passed a resolution calling on Governor Bumpers and the State Legislature to spend up to four

million dollars in State money to develop the "Medical School Without Walls" program.

The proposal was originally made by the University of Arkansas School of Medicine to send senior medical students, interns and residents into the State to work in practical, everyday situations with practicing physicians and help combat the shortage of medical doctors in out-lying areas around the State.



## OBITUARY

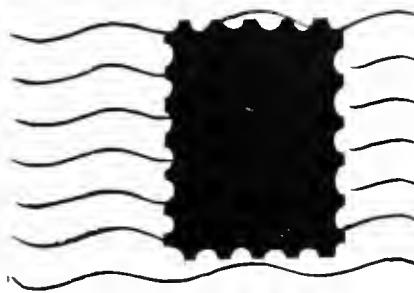
### **Dr. Nicholas W. Riegler, Sr.**

Dr. Nicholas W. Riegler, Sr., of Little Rock, died December 27th, 1972. He was born February 7, 1888.

Dr. Riegler was graduated from the University of Arkansas School of Medicine in 1915 and entered general practice the same year. During World War I, he served as a first lieutenant in the Army Medical Corps and assisted in designing the first air ambulance used by the Army. Dr. Riegler was in practice with the late Dr. Homer A. Higgins from 1926 to 1940, when he was joined in his practice by his son, Dr. Nicholas W. Riegler, Jr., forming the partnership of the Riegler and Riegler Clinic.

Dr. Riegler was a member of the American Medical Association, the Arkansas Medical Society, the Pulaski County Medical Society, and the Fifty Year Club of American Medicine; he was a life member of the American Academy of Family Physicians. He had been a member of the medical staff of St. Vincent Infirmary since 1915 and the Baptist Medical Center since its initial organizational meeting in 1921. He had served on the associate, active, and honorary staff of both hospitals.

Dr. Riegler was a member of Faith Lutheran Church and a member of many civic clubs. He is survived by two sons, Nicholas, Jr., and Hubert; one daughter, Mrs. Tennie Richardson; sixteen grandchildren and two great-grandchildren.



## LETTERS TO THE EDITOR

Dr. Alfred Kahn, Jr., Editor

Journal of the Arkansas Medical Society  
1300 West 6th Street  
Little Rock, Arkansas

Dear Dr. Kahn:

I thought your readers might be interested in knowing of a recent incident here in Little Rock.

There was an item in one of the statewide newspapers one weekday morning advertising ear-piercing by a "nurse" at one of the large chain department stores. I tried to follow this up and could get very little information on it. I did visit the store in question and actual ear-piercing was going on. The lady in attendance said that she was a "nurse's aid". I am not sure what she meant by this. At any rate we spoke to several official bodies but apparently there was no exact mechanism for help on this. At a later date, the State Nursing Board appealed to the Attorney General's office and got a ruling that this procedure apparently is illegal and can only be performed by a licensed physician or someone under his direction.

This letter is being written to you so that the readers of the Journal who may have a similar problem arise in their community will know of this recent decision in this matter.

Sincerely,

/s/ Harry Hayes, Jr.  
Harry Hayes, Jr., M.D.

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**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

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Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

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Vol. 69 No. 10

FORT SMITH, ARKANSAS

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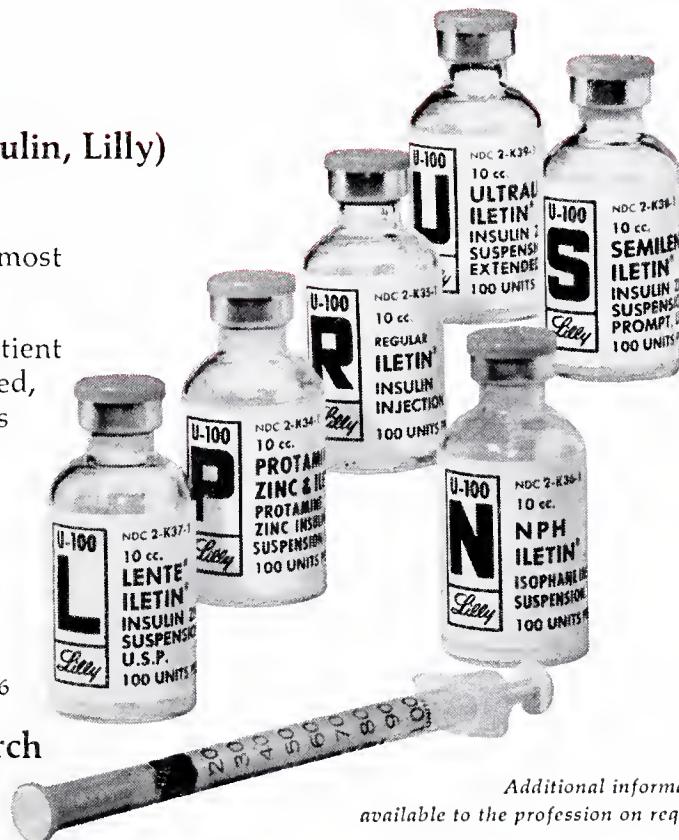
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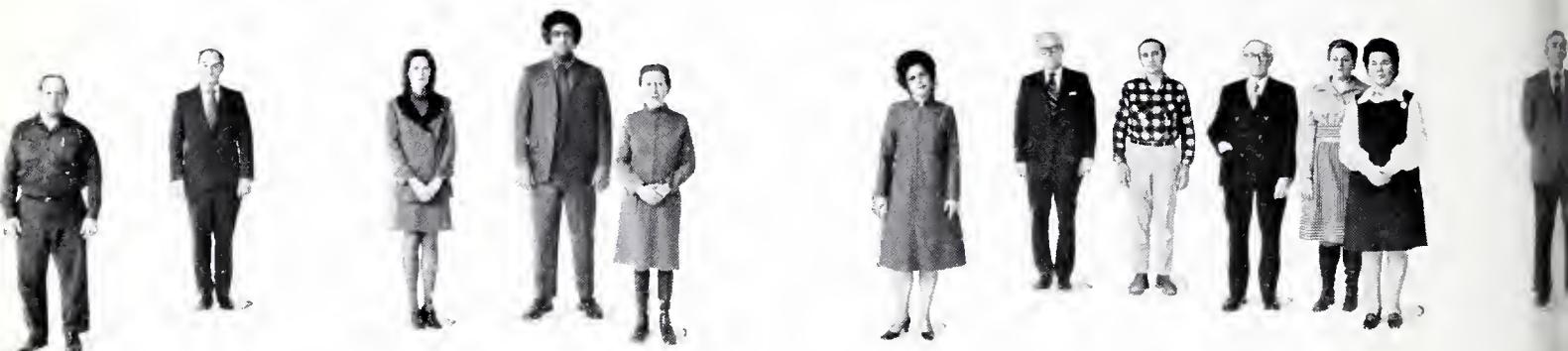
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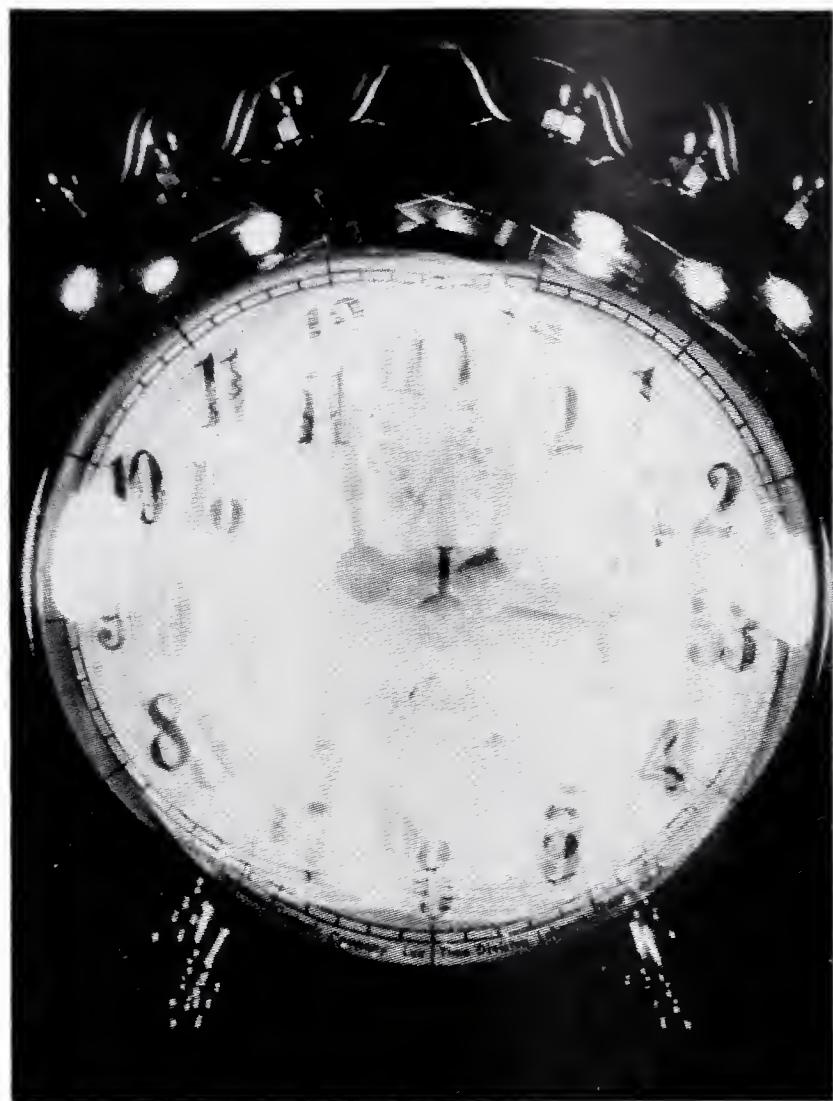
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# Anterior Decompression in Cervical Disc Degeneration\*

Wilbur M. Giles, M.D.\*\*, Warren C. Boop, M.D.\*\*\*, Stevenson Flanigan, M.D.\*\*\*\*

## Introduction

**A**nterior decompression has proven effective in the management of symptoms resulting from ruptured cervical intervertebral discs. Indications for the procedure are outlined, and early results are presented describing experiences with the diagnosis and treatment of cervical disc disorders at the University of Arkansas Medical Center and Veterans Administration Hospital.

Cervical osteoarthritis results from degenerative intervertebral disc changes with a secondary hypertrophic osteophyte formation.<sup>9</sup> When these osteophytes develop along the posterior margins of the cervical vertebrae, central transverse bars and lateral spurs of hard bone are produced. When the osteophytic process occurs postero-laterally, at the joint of Luschka, the intervertebral foramen through which the cervical nerve root emerges is overshadowed. It is also this region through which ruptured fragments may extrude and cause root embarrassment.

Osteophytes may be obvious by roentgenogram yet symptoms not present. Although the position and size of these spurs are important, it has been shown (Robinson & Smith, 1958) that the mobility of the neck at the level where the osteophytes occur is more important. Robinson has also stated that disc degeneration with or without accompanying osteophyte formation, subluxation, instability of one cervical vertebra or another, or intervertebral disc protrusion can often be considered the pathological cause of neck, arm, hand, and chest pain. In the absence of segmented radicular signs and symptoms of neurologic deficit the extremity symptoms are

usually a consequence of thoracic outlet compression with scalene muscle spasm.

Rest and immobilization are often effective in relieving head, neck, shoulder, and arm pain.<sup>7</sup> This may require protracted reduction in daily activity and the use of a stabilizing collar device. If conservative treatment fails to relieve the pain, or if the treatment becomes excessively burdensome to the patient, surgery can provide gratifying relief. The surgical removal of the extruded disc fragments can be performed by posterior laminectomy<sup>2,11,12</sup> even limited to a medical facetectomy.<sup>3,4,5,10</sup> By anterior decompression the degenerative disc as well as the extruded fragments can be removed and stabilization can be accomplished by insertion of bone taken from the iliac crest.<sup>3,4,5,6,9,12,13,14,16</sup>

Fusion of the cervical spine can be carried out by either approach; commonly it is a part of the anterior procedure. It is unnecessary with either approach except under circumstances of instability. With extensive dorsal exposure and facet encroachment some degree of subluxation may develop. Cloward<sup>3</sup> described the posterior operation as hazardous in that the spinal cord must be manipulated; but, for the radicular compression due to an extruded disc, it is a technically safe and effective procedure. The immediate post-operative convalescence is longer and recurrent cervical musculoskeletal symptoms from the same interspace may occur.

Robinson and Smith<sup>9</sup> reported an anterior approach that has become popular and has shown favorable long term results. Cloward<sup>3</sup> in 1958 added his impression that a stronger and more efficient spine could be obtained by fusing two adjacent vertebrae over an intervertebral space than by attempting to fuse the laminae and spinous processes posteriorly. One expressed dis-

\*From the Department of Surgery (Neurosurgery), University of Arkansas Medical Center and Veterans Administration Hospital.

\*\*Resident, Neurosurgery.

\*\*\*Associate Professor, Neurosurgery.

\*\*\*\*Professor, Neurosurgery.

advantage of the anterior approach in the treatment of the extruded "soft" cervical intervertebral disc is the limited visualization of the compressed nerve root.

Fixation of one interspace can accentuate the degenerative process in another. Weiss<sup>16</sup> has stated that this objection is a valid one. Degenerative disc changes may occur in several interspaces and identification of the symptomatic interspace can be difficult. A preoperative neurological examination can often identify the level of the disability as a consequence of nerve root compression. Myelography is most helpful in the face of osteoarthritic changes at more than one level. The accentuation of the symptomatic discomfort with discography provides another diagnostic device. Evidence of disc rupture on discography is often manifest at multiple interspaces, some of which may not be symptomatic.

Stuck<sup>14,15</sup> considers symptoms that suggest irritation of the annulus of the disc merit consideration of disc removal by the anterior approach. These patients complain of headache, neck, shoulder, and arm pain, muscle spasm and numbness, and limitation of motion. There may not be the segmental radicular pain and paresthesias of root compression. The muscle weakness and alteration of reflexes is often lacking. Cloward<sup>4</sup> demonstrated the area of reference of symptoms from irritation of the annulus of the ruptured disc. He attributed these areas of referred pain to the sinuvertebral nerve as the source of the nerve supply to the annulus. Interference with the vertebrobasilar blood supply by ruptured disc or osteoarthritic processes that compress the vertebral artery account for another small group of patients with attacks of headache, light headedness, dizziness, staggering and loss of consciousness.

### **Operation**

#### **(A Modified Smith-Robinson Technique)**

The patient is placed on the table in the supine position and general endotracheal anesthesia is employed. A small sand bag is placed beneath the back of the neck to provide firm support for the operative area. A head halter is placed on the patient and fifteen pounds of traction is applied. The patient's feet are anchored to the foot of the table to prevent movement toward the head of the table when additional weights are added. The left anterior neck is used and it and the right iliac crest are prepared and draped

for surgery. The left side of the neck is used, selected ordinarily because of the more predictable course and position of the recurrent laryngeal nerve. On the right side aberrant innervation of the larynx may lead to injury to the nerve and hoarseness. A diagonal incision is made along the skin crease at an appropriate level to facilitate exposure of the interspace to be operated. The incision is about eight centimeters in length. It is carried through the skin and subcutaneous tissue. The platysma muscle may be cut or separated in the direction of its fibers after elevating the skin flaps. The sternocleidomastoid muscle is retracted laterally and the sternohyoid and sternothyroid muscles medially. The omohyoid is retracted inferiorly or superiorly depending on the level that is to be exposed. The carotid sheath is easily palpated. It is retracted laterally using sharp and blunt dissection. The sternothyroid and sternohyoid muscles, the esophagus, trachea and the thyroid gland are retracted medially. The paravertebral fascia is opened longitudinally and the exposed interspace identified radiographically. The longus colli muscles and anterior longitudinal ligament are elevated laterally above and below the appropriate interspace. The retractors are hand held and relaxed at intervals during the procedure to prevent the effect of extended pressure on the trachea, esophagus and the carotid artery.

The annulus is incised around the presenting aspect of the disc. The disc is then removed along with the adjacent cartilaginous plates using currettes and rongeurs. The space is measured. It usually accepts a bone plug measuring seven to eight millimeters high and ten to fourteen millimeters wide and ten to twelve millimeters deep. As it is cut from the crest of the ilium the bone wafer is horseshoe-shaped and consists of cancellous bone surrounded on three sides by cortical bone. The fascial attachments and the areolar tissue are removed from the cortical surfaces. The cancellous top and bottom surfaces of the graft lie against the previously exposed subchondral cortical surfaces of the vertebral bodies above and below the interspaces while the cortical exterior of the graft assumes a vertical position in the space with the unsurfaced side placed dorsally. Additional traction is applied to the head halter to further widen the intervertebral space. The bone graft, when inserted, is tapped into position and is countersunk about two milli-

meters. Roentgenograms are again taken to insure that the desired depth has been achieved. The anterior longitudinal ligament is approximated and the deep soft tissues are allowed to assume natural posture. The subcutaneous layers and the skin are closed as separate layers. No drains are used. The Cloward technique was used under selected circumstances.

#### **Post-operative Course**

The patient is kept at bed rest for three days. On the fourth post-operative day a soft collar support is applied and the patient is made ambulatory. The sutures are removed on the seventh post-operative day and the patient is discharged with the soft collar support. In the post-operative clinic at one month, the soft collar support is discontinued. In most cases the arm pain, preoperative neck and suboccipital pain are absent immediately following surgery, although the arm symptoms at times resolve more gradually over a few days. Should two levels be operated at one time, the patient is usually immobilized for seven days before he is given ambulatory status.

#### **Results**

For this report early results are presented describing experiences with the diagnosis and treatment of cervical disc disorders. This series represents a group of patients who were treated from July 1, 1967 to January 1, 1971, at the University of Arkansas Medical Center and the Veterans Administration Hospital. A total of 104 cases were operated during this 3½ year period. Hospital records were not obtained for review on twelve cases. Ten cases were excluded because of other problems in follow-up, and 25 were excluded as they represented disc derangements associated with fractures of the cervical spine. The remaining 57 cases form the basis for this presentation.

Diagnosis was established by the combined use of presenting signs and symptoms, plain X-rays, myelograms, and in three cases, discograms. The chief complaint or presenting symptom was invariably pain of varying intensity. Neck pain was reported in 17 per cent, arm pain in 21 per cent and a combination of both in 61 per cent. The duration of symptoms was quite variable, ranging from less than one month to as long as 21 years. Age distribution varied from 21 years to 69 years but 73 per cent of cases occurred in the 5th and 6th decades.

Symptoms and signs were classified into three major groups. (1) Cervical Disc Syndrome; those patients complaining of suboccipital headache, neck and medial parascapular pain, muscle spasm with limitation in movement of neck, and at times, numbness and swelling of the entire hand. (2) Radicular Syndrome; complaints attributable to irritation or compression of a nerve root. (3) Cord Syndrome; disability due to dysfunction of the spinal cord resulting from compression in the cervical area. Two-thirds of the cases fell into the category representing the cervical disc syndrome, 19 per cent the radicular syndrome and 14 per cent the cord compression syndrome.

The X-ray examinations were an integral part of the patient examination. Fifty-six per cent of the cases showed changes at the C-5 interspace and all of these revealed a defect on myelography at the same interspace. In this group there were myelographic changes at other intervertebral disc spaces in 33 per cent. The plain X-rays were reported negative or normal in 14 per cent of cases and the myelograms were indeterminate in 3 per cent of cases. In those instances where the myelograms were normal yet operation was performed, the long term results have not been satisfactory.

Spinal fluid protein determinations were reported in all but eight cases. The range was widely variable with a low of 23 mgm% and a high of 220 mgm%. In 44 per cent the level was over 50 mgm%. The nature of post-operative convalescence could not be predicted on the basis of the spinal fluid protein (as some have suggested).

The Smith-Robinson technique (with modifications) was carried out in three-quarters of cases (78 per cent). The Cloward procedure was used in the remaining 22 per cent. At the present time the two procedures are effecting essentially the same results in the relief of the preoperative pain. In the immediate post-operative period almost all patients identified a salutary effect with immediate, partial, or complete relief of pain from both the radicular and cervical disc syndromes. At three months follow-up, however, one-fourth to one-third of the patients were still recognizing symptoms of one or the other or both. Inquiry at one year revealed that nearly 50 per cent still had some symptoms of the sort for which the operative procedure was performed. It appeared that with the exception of the occasional situa-

tional adjustment instability (personality disorders), or with progressive myelopathy, the residual symptoms were not as bad as the pre-operative.

The most frequent levels operated were the fifth and sixth interspaces. Multiple levels were decompressed concurrently on eight occasions. Four patients have required second operative procedures. On all these occasions there were multiple interspaces involved on the initial pre-operative myelograms. Except for one case in which a wafer disintegration occurred, the secondary operations were done at those interspaces

suspect at the time of the original procedure. Nevertheless, the subjective and objective improvement with the initial operative procedure had been as expected. One patient had three levels fused, each at different times. His first decompression was at C-5 for a radicular syndrome. His myelogram preoperatively had also shown a large defect at C-3. Postoperatively he recovered brachioradialis strength and experienced relief of the forearm pain. Recurrent symptoms for which he was operated on the two succeeding occasions were categorized as the cervical disc syndrome. The second procedure was at

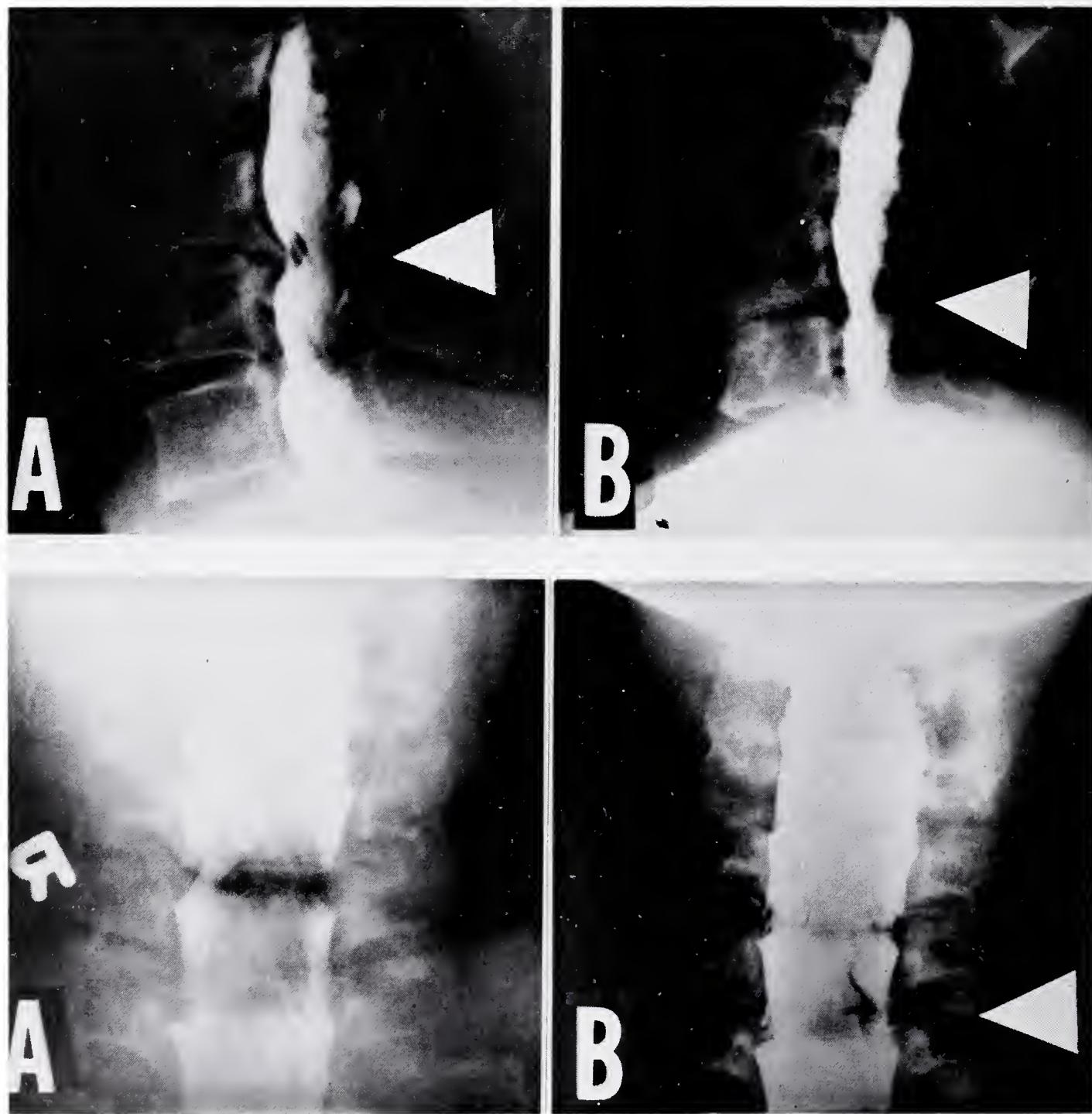


Figure 1.  
Reduction but persistence of myelographic defect at operated site (upper B print; note the removal of the bony osteophyte). The lower right print also raises the question that some disc material has extruded at the next lower space.

C-3 and he again achieved relief of pain for 23 months. The latest symptoms were attributed to a new myelographic defect at C-6. He was operated for a third time and presently is improved, but not working.

Follow-up myelograms were obtained in seven patients who complained of persistent symptoms. On five occasions the myelograms were normal. In the other two, one showed a persistent defect at the original operative site fifteen months post-operative (Figure 1). This patient refused a second operative procedure. The second case was reoperated for a defect one interspace higher seventeen months later. He presently remains asymptomatic.

### Complications

Complications were similar to those reported by other authors.<sup>3,4,6,8</sup> Almost all cases have transient esophageal pain and occasional hoarseness was apparent. Both are felt to be due to retraction on the esophagus and trachea, respectively. Wafer displacement occurred in three patients, none of which required reoperative intervention. Wafer disintegration occurred in one patient and symptomatically required a second operative procedure (Figure 2). This patient has continued to complain of neck and inter-

scapular pain. Infections appeared on four occasions, three times at the iliac crest donor site, and once at the neck wound. Except for the morbidity of the protracted convalescence they were of no consequence. One recurrent laryngeal paralysis occurred but cleared completely at six months. There was one death in the series. This patient represented a cord problem and his defect was at the C-2 interspace. He expired on the fifth post-operative day of respiratory insufficiency and pneumonia. Other complications mentioned by Cloward<sup>3,4</sup> and Robinson<sup>9</sup> are shoulder pain, post-operative hemorrhage, perforation of the pleura, and spinal cord injury. It would appear from most reported series that complications occur in less than 10 per cent of cases operated.

### Conclusions

Cervical intervertebral disc degeneration which produces pathological changes accompanied by neck, suprascapular, interscapular, occipital, arm, hand and anterior chest pain that do not respond to conservative measures can often be surgically improved. The method of anterior decompression that is employed at the Veterans Administration and University Hospitals is discussed. Fifty-seven cases are reviewed and gratifying results obtained in most cases. Approximately 30 per

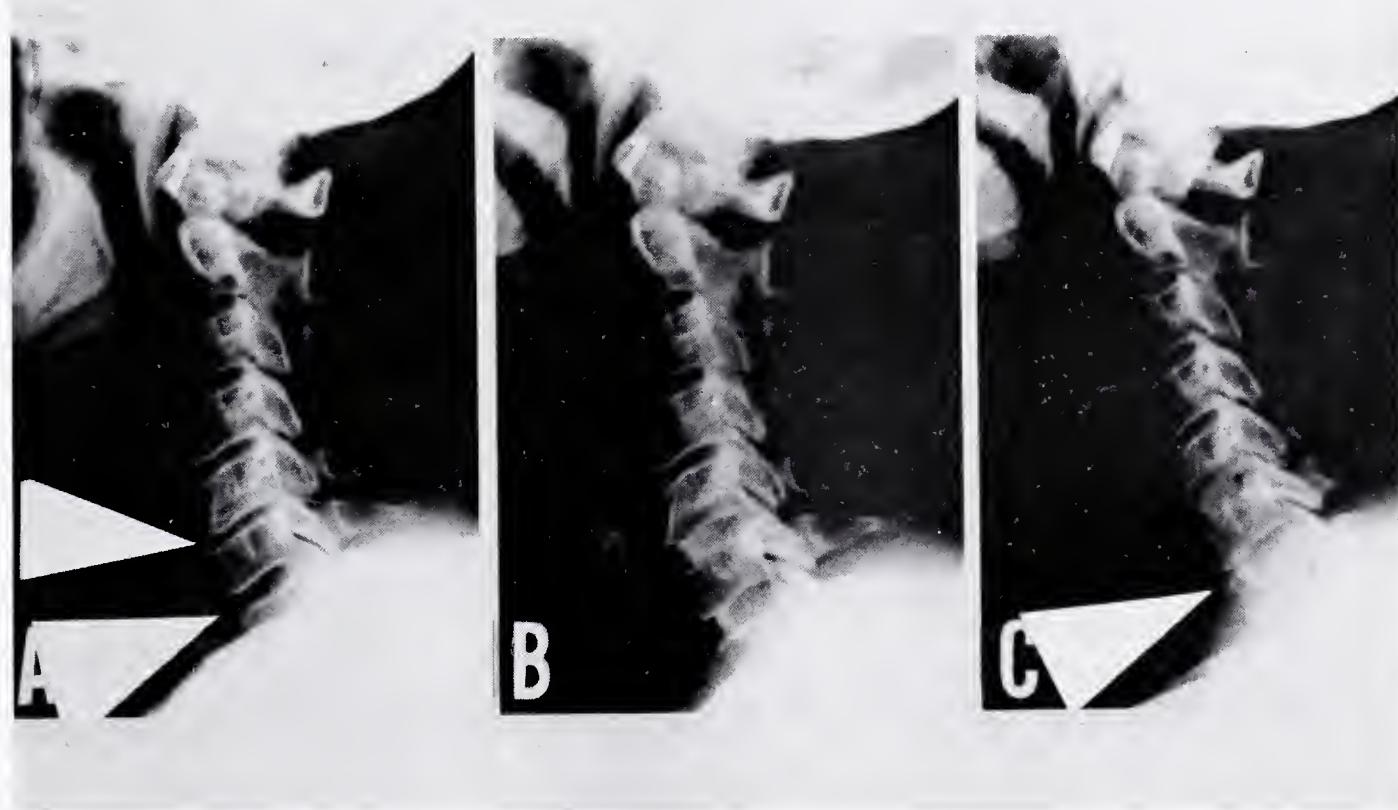


Figure 2.

"Wafer disintegration" in this case is more correctly interpreted as subchondral plate collapse of the upper surface of C7. The wafer has extruded into the body of C7. Repair was undertaken with the Cloward procedure when neck pain persisted.

cent of the cases complained of persistent symptoms. Aronson, et. al.<sup>1</sup> have presented a group of patients with results with this procedure. The assessment at one year appears more useful in gaining pertinent information.

## BIBLIOGRAPHY

1. Aronson, N., Bagan, M., and Filtzer, R.: Results of Using the Smith-Robinson Approach for Herniated and Extruded Cervical Discs. *J. Neurosurg.* 32:721, 1970.
2. Braham, J., and Herzberger, E. E.: Cervical Spondylosis and Compression of the Spinal Cord. *JAMA* 161:1560, 1956.
3. Cloward, R. B.: The Anterior Approach for Removal of Ruptured Cervical Discs. *J. Neurosurg.* 15:602, 1958.
4. Cloward, R. B.: New Method of Diagnosis and Treatment of Cervical Disc Disease. *Clin. Neurosurg.* 8:93, 1962.
5. Connolly, E. S., Seymour, R. J., & Adams, J. E.: Clinical Evaluation of Anterior Cervical Fusion for Degenerative Cervical Disc Disease. *J. Neurosurg.* 23:431, 1965.
6. Albright, J. A., Flanigan, S. and Southwick, W. O.: Common Complication of Surgery on the Cervical Spine. *Conn. Med.* 32:725, 1968.
7. Polley, H. F. and Slocumb, G. H.: Medical Treatment of Osteoarthritis. *JAMA* 157:489, 1955.
8. Rand, R. W. and Crandall, P. H.: Surgical Treatment of Cervical Osteoarthritis. *Calif. Med.* 91:185, 1959.
9. Robinson, R. A. and Smith, G. W.: The Treatment of Certain Cervical Spine Disorders by Anterior Removal of the Intervertebral Disc and Interbody Fusion. *J. of Bone and Joint Surg.* 40A:607, 1958.
10. Scoville, W. B.: Cervical Spondylosis Treated by Bilateral Facetectomy and Laminectomy. *J. Neurosurg.* 18:423, 1961.
11. Spurling, R. G. and Scoville, W. B.: Lateral Rupture of the Cervical Intervertebral Discs, A Common Cause of Shoulder and Arm Pain. *Surg. Gynec. and Obstet.* 78:350, 1944.
12. Spurling, R. G. and Segerberg, L. H.: Lateral Intervertebral Disc Lesions on the Lower Cervical Region. *JAMA* 151:354, 1953.
13. Stewart, D. F.: Anterior Approach to Degenerative Disc Disease of the Cervical Spine. *New York J. Med.* 61:3083, 1961.
14. Stuck, R. M.: Results of Anterior Excision of Ruptured Cervical Disc. *Amer. Surg.* 27:469, 1961.
15. Stuck, R. M.: Anterior Cervical Disc. Excision and Fusion Report of 200 Consecutive Cases. *Rocky Mountain Med. J.* 60:25, 1963.
16. Weiss, R. M.: Anterior Removal of Cervical Intervertebral Disc with Interbody Fusion. *New York Med. J.* 6386, 1963.



### Seasonal Incidence and Mortality of Ischemic Heart Disease

W. A. Harland (Univ of Glasgow, Western Infirmary, Glasgow, Scotland), M. G. Dunnigan, and T. Fyfe

*Lancet* 2:793-796 (Oct 17) 1970

From 1962 to 1966, the monthly Scottish hospital admission rate for patients with ischemic heart disease showed a dicyclic pattern of seasonal variation, with winter and spring peaks. The spring peak was inconspicuous in patients over 65 years. Hospital mortality from ischemic heart disease showed a pattern of winter/summer variation; mortality rose steeply with age and showed no sex difference. Total certified Scottish deaths from ischemic heart disease showed a monocyclic pattern of winter/summer variation, but an age-dependent spring rise in deaths was evident in younger subjects. The winter rise in the incidence of ischemic heart disease was related, directly or indirectly, to environmental temperature. The spring rise in incidence was not attributable to this cause and may reflect humorally determined rises in the levels of risk factors such as serum lipids, blood pressure, and altered platelet behavior.

### Management of Carcinoid Tumors

R. G. Martin (6723 Bertner Ave, Houston 77025)  
*Cancer* 26:547-551 (Sept) 1970

A series of 59 carcinoid tumors is presented. Histologically carcinoid tumors cannot be differentiated as being benign or malignant. They are slow-growing and surgical excision is the preferred treatment. Local excision for lesions under 2 cm and more radical excision along with the regional lymph nodes for larger lesions are indicated. Twenty-five percent of the lesions in this study developed in patients having other primary cancers. Tumors may be multiple, as often is the case in ileal lesions. A certain number of patients develop the carcinoid syndrome with all or many of its characteristic symptoms. Chemotherapy and x-ray therapy have limited use in the management of these patients. Antiserotonin drugs and cortisone may be beneficial in the therapy of carcinoid syndrome. In this study all patients with the syndrome died, but three patients died from the disease without having the syndrome. All other deaths were attributed to causes not related to the carcinoid lesions, often from coexisting malignancies.

# Carcinoma of the Larynx

Orval E. Riggs, M.D.\*

Early lesions of the larynx are curable by either surgery or irradiation. Radiation treatment therefore is generally to be preferred since it offers preservation of the voice to the patient. An additional factor favoring irradiation is the knowledge that its failures are often salvageable by surgery. The cosmetic effect of megavoltage treatment generally is to be preferred to the post surgical appearance of the neck.

The types of tumor growth in the larynx include the following:

- (1) exophytic
- (2) infiltrative
- (3) ulcerative

Exophytic lesions are more responsive to radiation treatment. In addition, the extent of disease is generally more easily determined than in infiltrative or ulcerative lesions.

The application of radiation therapy for cure is limited, by and large, to T1 and T2 lesions. Where there is invasion or infiltration into cartilage, the pre-epiglottic fat, to subglottic areas, or through the wall of the larynx, the response to the radiation is poor because these are poorly vascularized, myxomatous, anoxic tissues. Radiation therapists will treat, for cure, vocal cord tumors with normal mobility or bulky tumors with partial cord fixation where still limited to the vocal cords.

The application of radiation therapy can be classified as follows: (1) therapy for cure, (2) therapy for palliation, (3) pre-operative irradiation, (4) post-operative irradiation and (5) irradiation for post surgical recurrence. Recurrence of tumor after a full course of irradiation should be treated surgically and no further irradiation administered. Additional factors that influence the choice of radiation treatment of vocal cord tumors include (1) they are generally well-differentiated tumors; and (2) the true cords have a sparse lymphatic supply.

## Radiation Therapy For Cure

The pattern of treatment in a curative attempt by radiation may include several fractionation schemes. Six thousand rads in  $5\frac{1}{2}$  weeks, 6500 rads in 6 weeks, or occasionally 7000 rads in  $6\frac{1}{2}$  weeks, the last 500 rads of which is administered to very small portals, constitute different frac-

tionation schemes of approximately the same radiobiological effectiveness. It is recommended that the arytenoids be excluded from the treatment field by moving the posterior margin anteriorly 1 to  $1\frac{1}{2}$  cm when the course of treatment has reached approximately 5000 or 5500 rads. Portal margins are as follows: the upper margin is at the thyroid notch; the lower margin is at the cricothyroid groove if the anterior commissure is free, but slightly lowered if the commissure is involved; the posterior margin is at the horns of the thyroid cartilage, and the anterior margin is where the beam falls off the skin. Portal sizes may range from 4 x 5 cm, 5 x 5 cm, up to 6 x 6 cm. Larger fields are seldom required and with larger fields the incidence of post-irradiation complication increases. For a lesion of the central cord, a single lateral portal is recommended. When both cords, or when one cord and the anterior commissure are involved, lateral opposing portals are recommended and half of the treatments are given by wedged fields. For the more unusual posterior cord lesion a single wedged port is preferred.

## Results

Eighty-five per cent to 90% cures should be accomplished with primary irradiation for lesions as described above. A 10% to 15% recurrence rate is acceptable and laryngectomy salvages the majority of these recurrences.

## Complications

The usual complications that are seen are (1) severe laryngeal edema, (2) radiation necrosis, either of soft tissue or cartilage. Formerly, a complication rate of approximately 10% was encountered. More recent M. D. Anderson studies report a complication rate of approximately 2%. Edema or necrosis occurs at 6 to 12 months after treatment and usually is the result of large portals. Edema may require permanent tracheostomy and necrosis may be treated by laryngectomy.

Palliative radiation therapy is usually planned for T3 and T4 lesions. Laryngectomy is preferred if feasible and the patient agrees to its performance. Although palliation is anticipated, occasionally one can get good results in these more extensive lesions with radiation therapy. The treatment portals should include the neck, and

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the same or similar dose as for cure is utilized. Complications are more frequent. Occasionally, laryngectomy can be performed after the course of treatment has been administered to a patient for which surgery was not initially acceptable.

Pre-operative irradiation appears to have little to offer to the lesions limited to the cords or anterior commissure. Where nodes are present in the neck, 5000 rads in 5 weeks, or 4000 rads in 4 weeks may be given as a pre-operative course. Though once recommended, 2000 rads in two weeks is not an adequate pre-operative scheme.

Post-operative irradiation, distinguished from treatment for post surgical recurrence, is recommended when the surgeon feels that his margins of resection are questionable or reported to be such on examination of the pathologic specimen. Two areas of doubt are frequently encountered. The first is the anterior neck area when the lesion extends to or invades the thyroid cartilage. The second is present with subglottic extension which may lead to recurrence at the tracheal stoma. A curative course of treatment should be given in the post-operative plan. Skin and soft tissue post-irradiation effects are acceptable and generally of relative insignificance.

The final consideration is that of therapy for post-surgical recurrence. The tracheal stoma is the most common site of recurrence. A single *en face* portal to the stoma, the lower neck, and the upper mediastinum is used. A relatively small field is sufficient and a complete curative course is administered although perhaps in a shorter period of time. Other recurrent sites in the neck are treated with small fields and fractionation into a 6000 rad dose in 6 to 10 days may be utilized.

Mention should be made of carcinoma *in situ*. Occasionally the pathologist reports that a lesion is *in situ carcinoma* and the question of appropriate treatment arises. It is recommended that these patients receive a curative course of radia-

tion therapy just as surely as if the lesion was T1. The results are good.

Subglottic invasion or a primary subglottic tumor, and supraglottic tumors generally are best treated by surgical approach. Certain supraglottic lesions may be considered for irradiation for cure and a full course of treatment should be given to those patients who are not surgical candidates or who refuse surgery. The results overall are poorer with approximately 25% recurrences and a 20% complication rate. The five year cures depend on the extent of lesion that is treated.

Generally, radiation treatment for carcinoma of the larynx in this country implies treatment with Cobalt 60. Where a linear accelerator or a Betatron is available, I believe that they constitute a treatment advantage. I do not believe the kilovoltage should be used for treatment of carcinoma of the larynx at the present time.

A final comment regarding care and follow-up of the patient during radiation treatment is indicated. These patients should be carefully observed during the course of their treatment, and should be examined frequently for long periods thereafter. The need for alteration of fields, interruption of treatment, or change in overall therapy scheme may be recognized and implemented. Patient acceptance and final results are favorably influenced by appropriate attention during the treatment course. Helpful and appreciated measures may include:

- (1) Antibiotic coverage for necrotic and infected lesions. Most are this nature.
- (2) Oral hygiene is of extreme importance and careful toilet of the entire oral and pharyngeal areas urged.
- (3) The nutrition of the patient should be maintained and supported. Application of these and other medical supportive measures assures maximum benefit from radiation therapy.



# Abortion Applicants in Arkansas

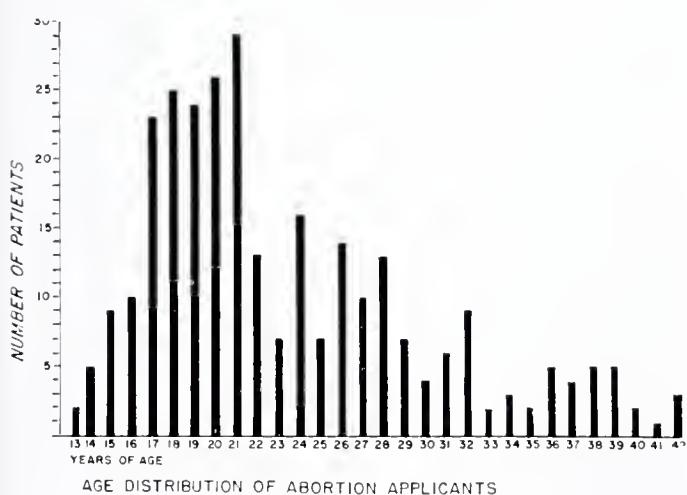
Fred O. Henker, III, M.D.\*

Whether planned or not, pregnancy is a deviation from the average woman's usual way of life and thus requires both physical and psychological adjustment. Though most women make the change smoothly, exceptions are fairly frequent. Physical complications of pregnancy are well known. Psychological reactions are more subtle but quite capable of producing agony and disability.

This paper deals with characteristics of 300 patients manifesting significant stress from unwanted pregnancies between May 1, 1970 and June 30, 1971. It portrays the types of women in Arkansas with this problem who are willing to seek medical aid, something of the determining factors and the effects upon the patients.

Information was gathered in four categories: basic personal features, personality forming factors, nature of stress of unwanted pregnancy, and the nature of the psychiatric disturbances precipitated. Comprising basic personal features were: age, race, place of residence, education, religion, occupation, marital status, obstetrical history, and personality type.

Agewise, patients ranged from 13 to 47 with the heaviest concentration occurring in the range 17 through 21. Of the 300 patients, 30 (10%) were under 17, 131 (43.6%) 17 through 21, 55 (18.3%) 22 to 25, 46 (15.3%) between 26 and 30, 18 (6%) between 31 and 35, 16 (5.3%) between 36 and 40, and four (1.3%) above 40.

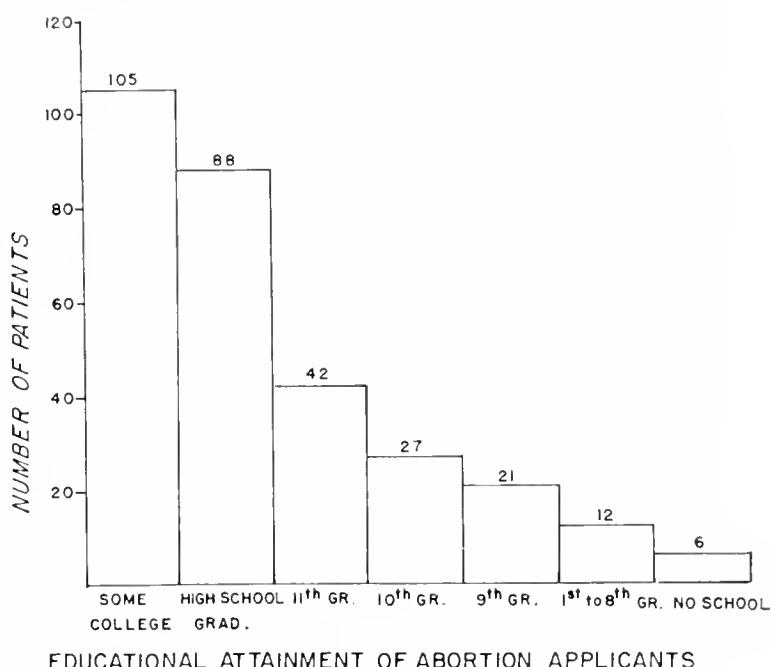


From the standpoint of race, most of the patients were Caucasian, 274 (91.3%). Twenty-

three (7.7%) were Negro, and three (1%) Oriental. The respective percentages in the Arkansas population, according to the 1970 census are: Caucasian, 81; Negro, 18.6; and other, four.

Place of residence of the patients was predominantly urban. Coming from cities with population above 40,000 were 144 (48%). Ninety (30%) were from towns 200 to 40,000 population, and 66 (22%) were from rural areas.

Educationally, the majority of the subjects were at or above high school level. There were 105 (35%) with some college education, and 88 (29%) were high school graduates. Completing the eleventh grade were 42 (14%), tenth grade 27 (9%), ninth grade 21 (7%), and 12 (4%) had some schooling but had not reached the ninth grade. Only six (2%) had received no formal education.

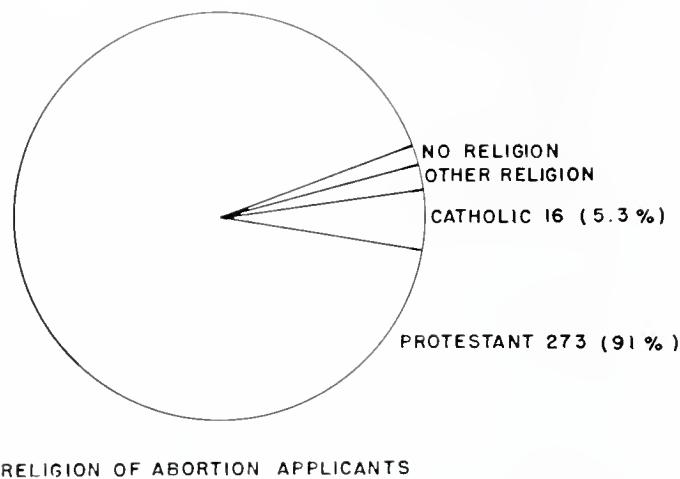


## EDUCATIONAL ATTAINMENT OF ABORTION APPLICANTS

Religious association at some time was professed by all but five patients (98%). This is somewhat higher than the rate of religious affiliation for the overall Arkansas population of 55%. There were 273 (91%) Protestants, 16 (5.3%) Catholics, one Jewish, and five other. This is very close to the religious distribution in Arkansas: 94% Protestant, 5.6% Catholic, and 0.4% other. Though nominally connected with some religious group, 189 (63%) stated they were inactive or participated very rarely.

\*Associate Professor of Psychiatry, University of Arkansas Medical Center, 4301 West Markham, Little Rock, Arkansas 72205.

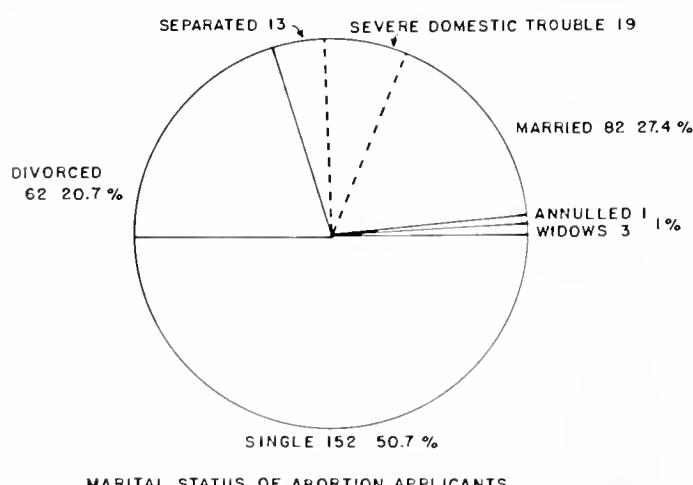
## ABORTION APPLICANTS IN ARKANSAS



RELIGION OF ABORTION APPLICANTS

Occupationally, the largest group of the subjects, 87 (29%), were students. In the role of housewife or homemaker were 41 (13.6%). Professionals, 52 (17.3%), included 18 (6%) health service workers (nurses, technicians, etc.), 16 (5.3%) each schoolteachers and cosmetologists, a junior executive, and a real estate agent. There were 33 (11%) each secretaries and clerical workers, 29 (9.6%) waitresses, and 18 (6%) factory workers. Only eight (2.6%) were unemployed.

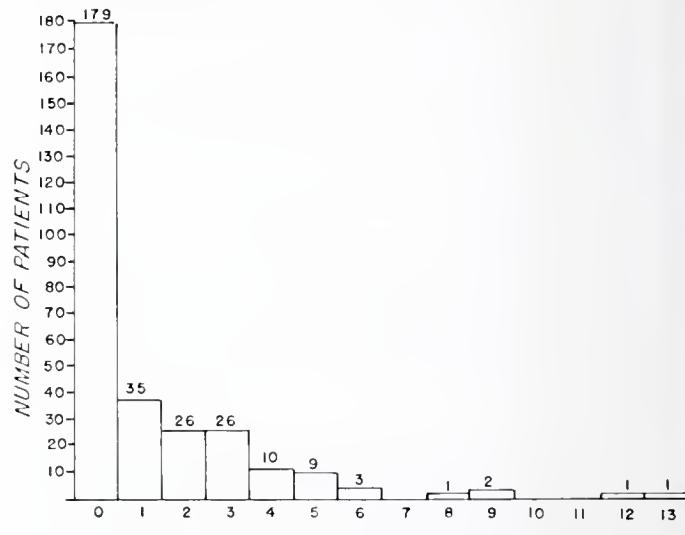
Maritally, the majority, 152 (50.6%), were single. Another 62 (20.6%) were divorced, eight of which had had multiple marriages and divorces. Of 82 (27.3%) who were married, 19 were having severe domestic trouble and 13 were separated. Ten of the married patients had been married one or more times previously. Five patients had married within one week of the time they were interviewed. There were also three widows, and one marriage had been annulled.



MARITAL STATUS OF ABORTION APPLICANTS

Obstetrical histories revealed that the greatest portion, 179 (59.6%), of the patients were primiparas. There were 35 (11.6%) with one previous child, 26 (8.6%) had two, 26 (8.6%) had three, 10 (3.3%) had four, nine (3.7%) had five, and

eight (2.6%) had had more—up to 13. Five patients admitted previous induced abortions.



PREVIOUS PREGNANCIES BY ABORTION APPLICANTS

The basic personality types were largely unremarkable or only mildly deviant. There were 149 (49.6%) of the average type without prominent differentiating characteristics. Neurotic personalities accounted for 55 (18.3%). Of these, 15 were classified as hysterical, 21 were lifelong nail-biters, 16 reported lifelong nervousness, and 12 were found to be emotionally immature or labile. Psychophysiological tendencies were reported by 29 (9.6%). Seventeen had gastrointestinal problems and six each had obesity and chronic headaches. Twelve subjects had noticeable schizoid features while four had mildly active schizophrenia. Nine women told of prior "nervous breakdowns". Sociopathic features occurred in 37 (12.3%) patients. Twenty-two were strongly passive-aggressive, five frankly rebellious, four delinquent, three antisocial, and three alcoholic. Four subjects were mentally retarded, three were epileptic, two hypomanic, and three probably early menopausal.

Personality molding factors were circumstances operating in the early years of life affecting the characteristic pattern of adjustment. Included here are family socio-economic position, ordinal position, and stability of family.

The occupation of the father was taken as a fair estimate of the socio-economic status. Blue-collar workers accounted for the majority, 166 (55.3%), suggesting middle to lower-middle class origins for indicated patients. At the lower level were 29 (9.6%) daughters of common laborers, and three (1%) daughters of totally disabled fathers. Fathers of 74 (24.6%) were of the white-

collar group—managerial, clerical, and sales—suggesting middle and upper-middle class origins. At the upper socio-economic level were 18 (6%) daughters of professionals: four ministers, three lawyers, three physicians, and eight teachers. Ten subjects (3.3%) were children of career military personnel.

Ordinal position favored the oldest child in a small family. One hundred fourteen (38%) patients were oldest children, 18 (6%) were only children, and 81 (27%) were youngest children. Seventy subjects (23.3%) were from families of two children, 92 (30.6%) three children, 42 (14%) four children, 30 (10%) five children, and 48 (16%) more than five children.

Family stability had been gravely compromised for 119 (39.6%) of the patients. One or both parents had been lost through death by 31 (10.3%), in 12 cases before the patient's sixth year. Divorce had occurred in the families of 50 (16.6%), 22 of these before the patient reached the age of six. Fathers of 15 (5%) were away most of the time working. Twelve (4%) patients reported a parent with chronic alcoholism, six had parents who were chronic psychiatric patients, and five had parents in prison.

The degree of psychologic stress varied according to the patient's attitudes toward their unwanted pregnancies, largely in three categories: inexpedience, self-depreciation, and aversion. By far, the most frequently encountered, 248 (82.6%), was inexpedience. This was manifested by interference with education or work of self or partner, financial or effort burden of another child, entrapment—either having to marry or increased difficulty getting out of a marriage, possibility of deformed baby or physical damage to self, and damage to marriage by pregnancy from outside. Self-depreciation, occurring in 167 (55.6%), was manifested most frequently by guilt over pregnancy out-of-wedlock. Older women were embarrassed over being "caught" so late in

life. Some women were concerned over having disappointed close relatives or associates, particularly strong in several patients where a significant other-person was seriously disabled, either physically or mentally. Aversive attitudes were less frequent, occurring in 86 (28.6%). These involved intolerance of responsibility for a child, dislike of babies and children, and repugnance toward body changes in pregnancy.

Psychiatric entities precipitated by these unwanted pregnancies were mild. No new frankly active psychoses were encountered. The four cases of schizophrenia were mild and had been present before pregnancy in essentially the same degree, and the four mentally retarded patients remained unchanged. There were six (2%) cases of neurosis—three depressive, two anxiety, and one phobic—probably precipitated by the stress of unwanted pregnancy. The bulk of the patients, 286 (95.3%), was classified as adjustment reaction of adolescence or adult life. The manifesting symptom was depression in 191 (66.7%), anxiety in 60 (21%), and mixed anxiety and depression in 35 (12.2%). Suicidal threats were made by 22 (7.3%) patients, and eight had made suicidal gestures—six with drugs and two by lacerations. Nausea was reported by 78 (26%) patients but only 10 experienced troublesome vomiting. Insomnia bothered 88 (29.3%) of the women.

In summary, this study of 300 women requesting therapeutic abortion reveals the patients were predominantly Caucasian from small middle-class urban families often lacking stability. Religious distribution was essentially that of the region. Most had at least a high school education and were productively occupied. Attitudes toward pregnancy are classified under: inexpedience, self-depreciation, and aversion. Except for eight suicidal gestures, no grave continuing psychiatric disorders were found precipitated by pregnancies. Most were diagnosed adjustment reaction of adolescence or adult life.

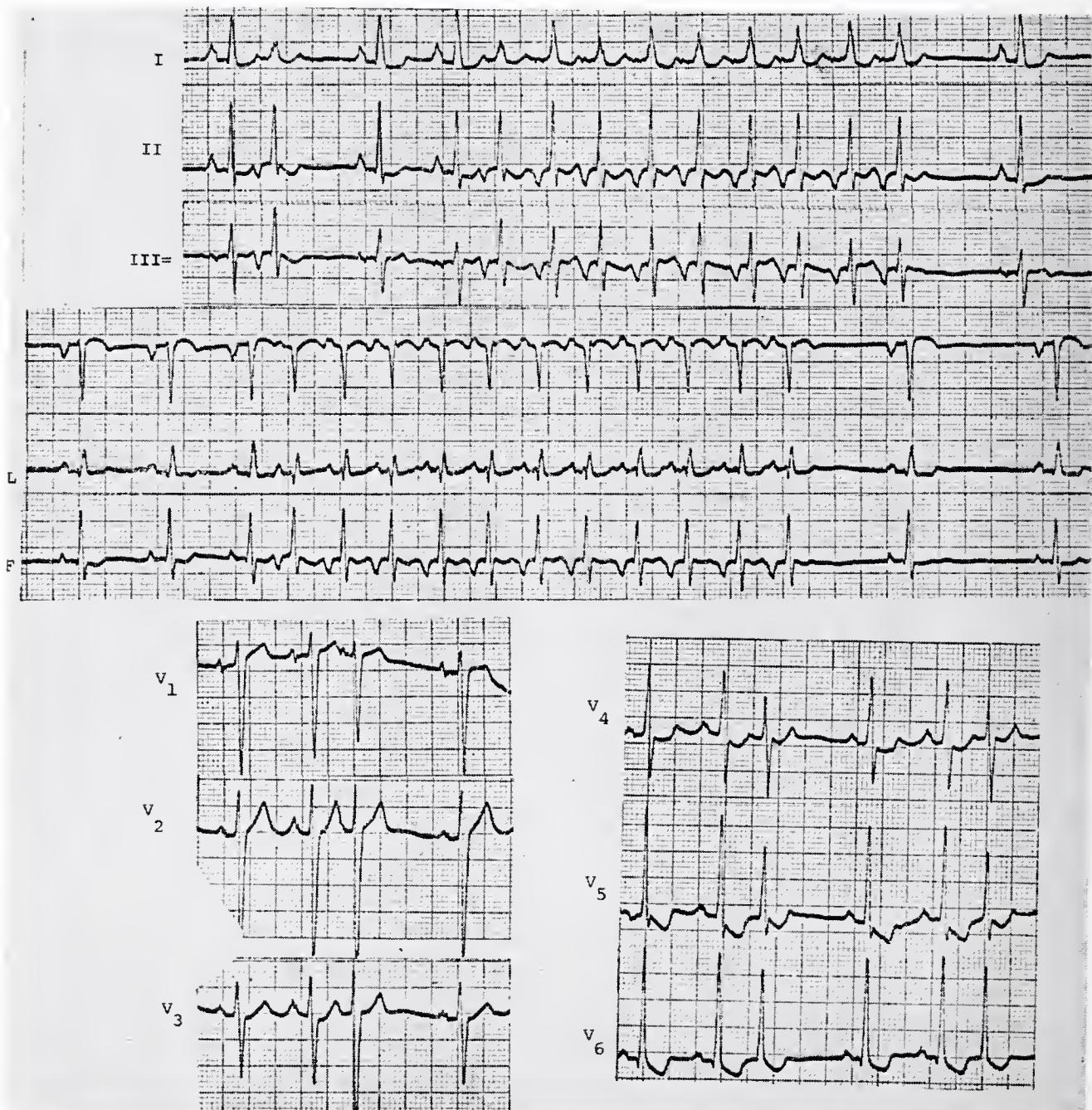


# ELECTROCARDIOGRAM

# OF THE MONTH

The Department of Cardiology, University of Arkansas Medical Center

See Answer on Page 310



12 year old white female; on digoxin and Prednisone; 2 most previously admitted in congestive heart failure.

John E. Douglas, M.D., Assistant Professor of Medicine and Physiology  
University of Arkansas Medical Center  
4301 West Markham  
Little Rock, Arkansas 72205



## VITAL STATISTICS Calendar Year 1971

Robert T. Bailey\*

In accordance with The Vital Statistics Act No. 471 of 1965, the Bureau of Vital Statistics is charged with registration, collection, preservation, amendment, and certification of vital statistics records, and activities related to and including the tabulation, analysis, and publication of statistical data derived from such records. Records include birth, deaths, fetal deaths, marriages, divorces, annulments, legal changes of names, and adoptions. All certificates are numbered, bound in volumes and indexed.

Births for the calendar year 1971 totaled 33,513 representing a rate of 174.2 per 100,000 population. The Bureau recorded 19,561 deaths during the same period, a rate of 101.7 per 100,000 population. Also recorded were 513 fetal deaths, a rate of 12.0 per 1,000 live births. All birth and death rates were based on the 1970 Census figures.

The ten leading causes of death are listed by rank, cause of death, total deaths, and rate per 100,000 population.

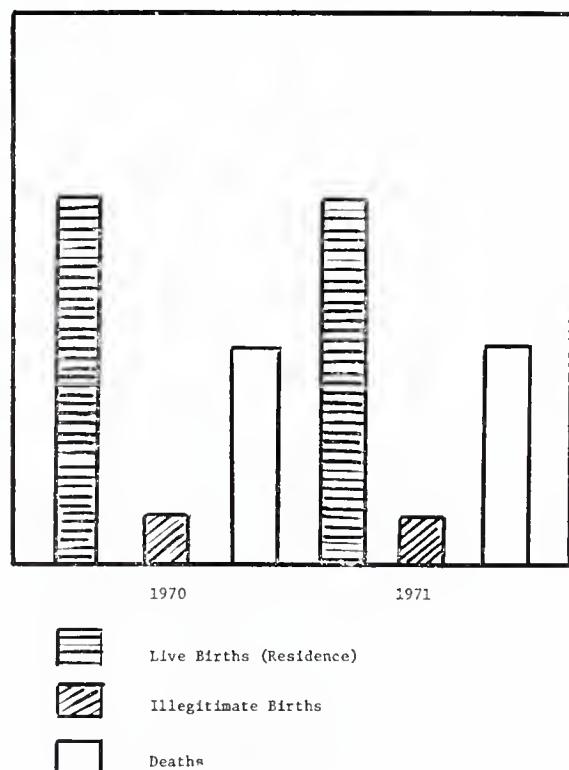
### The Ten Leading Causes of Death for 1971

Rank, Cause of Death	Total	Rate Per 100,000 Population	
		Population	
1. Diseases of the Heart	7288	378.9	
2. Malignant Neoplasms	3200	166.3	
3. Cerebrovascular Diseases	2668	138.7	
4. Accidents, Poisonings, and Violence	1608	83.6	
5. Senility and ill-defined diseases	622	32.3	
6. Pneumonia	480	24.9	
7. Certain Causes of Perinatal Morbidity and Mortality	356	18.5	
8. Diabetes Mellitus	339	17.6	
9. Bronchitis, Emphysema, and Asthma	308	16.0	
10. Arteriosclerosis	280	14.5	

Arkansas death certificates are coded according to the *International Classification of Diseases*, adapted for use in the United States by the U. S. Department of Health, Education, and Welfare.

Microfilm copies of all certificates of birth and death for Arkansas are mailed monthly to the Division of Data Processing, National Center for Health Statistics, Research Triangle Park, North Carolina. Photostat copies representing a ten percent of sample of all death records are sent to the National Center for coding structure review each month.

The 76 local Health Departments' registrars and two independent registrars representing all districts in the state file certificates of birth and death each month. Contact is maintained with the registrars, physicians, midwives, undertakers



\*Administrator, Bureau of Vital Statistics, Arkansas State Department of Health, Little Rock, Arkansas.

and hospitals in order to stimulate registration of these vital events.

Death records of 19,561 persons 17 years of age and older were issued during the year 1971 to the county clerks of the state as part of the requirements of the Voter Registration Amendment 51 of 1965. From the information supplied by the Bureau of Vital Statistics the clerks are able to maintain accurate voter registration records.

There were 24,094 marriage records and 12,959 divorce disposition records filed during the year 1971. The dispositions were divorces decrees, annulments, legal separations, and cases dismissed. Actual decrees granted represent approximately 95 percent of the total dispositions.

Delayed registration of certificates of birth accounted for 5,179, broken down as follows: 3,985 certificates were filed for those individuals born prior to February 1, 1914 and 1,194 were those individuals born since that date whose certificates were not filed within 12 months after their date of birth. Evidential requirements in the establishment of these previously unfiled records, as set forth in Section 14 of Act 471 of 1965 continues to increase the effectiveness of these records in all matters involving proof of age or citizenship.

A total of 1,577 adoptions, 391 legitimations and 378 changes of names were recorded for the year 1971.

The statistical section of the Bureau of Vital Statistics publishes a monthly report entitled, *Arkansas Monthly Summary of Vital Statistics*, also an annual report entitled, *Arkansas Annual Report of Vital Statistics*. These reports contain data on births by county of residence, attendant, and race; illegitimate births by county of residence; deaths by county of residence; deaths by cause and age groups; accidental deaths by age groups; infant deaths; marriages and divorces by county of issuance. The abortion surveillance reporting system on therapeutic or induced abortion data is maintained in accordance with The Arkansas Abortion Act, Act 61 of 1969. During the calendar year of 1971 there were 637 legal abortions reported. This data is reported by age of mother, race, marital status, gestational age, and indication for abortion.

In an effort to improve service to the public all 1953-1969 birth and death certificate indices

were placed on microfilm. Microfilm equipment was purchased to handle the new record-searching system, which previously consisted of IBM listings.



#### Oklahoma City Clinical Society-Oklahoma Academy of Family Physicians to Meet

The Oklahoma City Clinical Society and the Oklahoma Academy of Family Physicians will hold a combined meeting March 29, 30, 31, 1973, at the New Myriad Convention Center in Oklahoma City. For further information write: Mrs. Alma O'Donnell, Executive Secretary, Oklahoma City Clinical Society, 601 Northwest Expressway, Oklahoma City, Oklahoma 73118.

#### American Association for Clinical Immunology and Allergy Meeting

The annual meeting of the American Association for Clinical Immunology and Allergy will be held at the Hilton Palacio Del Rio Hotel, San Antonio, Texas, November 29-December 2, 1973. For further information write: Robert J. Brennan, M.D., President-elect, American Association for Clinical Immunology and Allergy, 3471 N. Federal Highway, Fort Lauderdale, Florida 33306.

#### Course in Medical Genetics

A postgraduate course entitled "Genetics in Your Practice of Medicine" will be presented Saturday, April 14, 1973, at the Willis-Knighton Memorial Hospital, Shreveport, Louisiana. For more information contact Richard Juberg, M.D., Louisiana State University Medical Center, Post Office Box 3932, Shreveport, Louisiana 71130.





## EDITORIAL

# Lithium, the Hyperactive Child and Manic Depressive Illness

F. A. Hava, M.D.\*

A theory is presented in this paper which proposes that at least some forms of hyperactivity in children, some impulse ridden adolescents, and some manic-depressive illness of adult life may be variations of the same disease, which we give a different label to depending upon the age of the patient. It is plausible that the chemical etiology for many of these cases is the same in the child, adolescent or adult. This does not imply that environmental influences do not modify a basic chemical predisposition in at least a percentage of these cases.

Lithium has been successful in approximately 70% of cases of adult manic-depressive illness. If the above theory is correct, one could anticipate that many hyperactive children should also respond to lithium therapy. There have been several reports of lithium treatment for MBD or hyperactivity. We are currently conducting a study in which MBD-hyperactive children who have either not been treated previously, or who have been tried on Ritalin or Dexidrine without success, are being started on therapeutically equivalent doses of lithium. Prior to initiation of therapy blood is drawn and Sodium, Potassium, Calcium, BUN, and other measures are being gotten. These tests along with serum lithium levels will be obtained during the course of treatment. Connor's teacher rating scale and parent rating scale will also be used as well as the clinical impression before and during treatment with lithium.

The above is not to say that all manic-depressives have been hyperactive or MBD children,

but that only a portion, especially those with a genetic etiology, may share a similar chemical imbalance.

There have been several studies of what happens in later life to the hyperactive child. Gabrielle Weiss et al have reported a five year follow-up study of the hyperactive child which showed that though hyperactivity had decreased, other handicaps including social and intrapsychic difficulties, attention span, and learning difficulties persisted. Apparently many hyperactive children do not simply "get over it" as they mature.

Perhaps something should be said at this point about the possible mode of action of lithium. Lithium is chemically related to Sodium and Potassium, both of which are of fundamental importance for almost all nerve activity. The work of Klingman and McBride 1967, and Kroll 1967, among others has shown that even low lithium concentrations affect synaptic transmission, electrolyte distribution, oxidative phosphorylation, intermediary metabolism of carbohydrates, amino acids, and phospholipids.

Interference of lithium with monoamine metabolism and the activity of monoamine neurones, primarily monandrenergic neurones, in the brain, has been studied extensively by Schildkraut et al and Schanberg et al. Lithium may decrease noradrenaline levels at the receptor sites. Data by Hashovec and Risanek (1967) and Corrodi et al (1967) seems to indicate lithium effects nonadrenaline metabolism and this may be correlated with its chemical and clinical effects.

In conclusion, the prevalence of depression in childhood and particularly the mood swings of

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the hyperactive child have yet to be adequately explained. It is only when this type of individual reaches adolescence and adulthood that the depression and mood swings, both high and low, receive more attention. It is as if the child has not learned to verbalize or otherwise symbolize his depression.

Similarly, perhaps what we call hyperactivity in some children, may later be called manic behavior in the adult. These ideas do not propose an invariable sequence from childhood hyperactivity with its unrecognized concomitant depressive episodes, to adult manic-depressive behavior. This theory does propose that this possibility does occur in a significant number of cases. Thus in many cases we may be dealing with the same underlying genetically determined chemical imbalance, and calling the behavior manifestations by different names depending on the age of the patient.

#### BIBLIOGRAPHY

Ansell, A. L., Lithium in the Treatment of Children and Adolescents. *Acta Psychiat. Scand. Suppl.* 207:19-30, 1969.  
Clements, S. D. and Peters, J. E., Minimal Brain Dysfunc-

tion in the School Age Child. *Arch. Gen. Psychiat.*, 6:185-197, 1962.

Corrodi, H. et al, The Effect of Lithium on Cerebral Monoamine Neurons. *Psychopharmacologia (Berlin)* 11:345-353, 1967.

Greenacre, P., The Predisposition to Anxiety. *Psychoanalytic Quart.*, 10:610-638.

Hammer, S. L., School Underachievement in the Adolescent; a review of 73 cases. *Pediatrics* 40:373-381, 1967.

Hashovec, L., Rysanek, K., Die Wirkung von Lithium aus den Metabolismus der Katecholamine und Indolalkylamine beim Menschen read at 1st. Zentraleuropäische Pharmakopsychiatrische Symposium 1967.

Klingman, J. D., McBride, W., Amino Acid Metabolism in Rat Superior Cervical Ganglion. Paper read at the I Int'l Meeting of the Int'l Soc. for Neurochem, Strasbourg 1967.

Schanberg, S. M. et al, The Effect of Psychoactive Drugs on Norepinephrine <sup>3</sup>H Metabolism in Brain, *Biochem Pharmacol* 16:393-99, 1967.

Schildkraut, J. J. and Kety, S. S., Pharmacological Studies Suggest a Relationship Between Brain Biogenic Amines and Affective States. *Science* 156:3771, 1967.

Weiss, G., Studies on the Hyperactive Child, VIII, Five Year Follow-Up. *Archives of General Psychiatry*, 24:409-414, 1971.

Wender, Paul H., Minimal Brain Dysfunction in Children, John Wiley and Sons, Inc., 1971.



## PERSONAL AND NEWS ITEMS

### Physician Appointed

Dr. Bascom P. Raney of Jonesboro has been appointed to the Arkansas State Medical Board for a term to expire December 31, 1980. Dr. Raney replaces Dr. E. D. McKelvey of Paragould whose term expired in 1972.

### Speakers Bureau

Dr. John T. St. Clair of Jonesboro will be the guest speaker at the April 11th meeting of the Trumann Lions Club. Dr. St. Clair will speak on "Vitamins, Hormones, and Drug Abuse".

### Physician Appointed to AAFP

Dr. Louis R. Munos, who is associated with the Village Medical Clinic in Cherokee Village, has been elected to the American Academy of Family Physicians.

### Dr. Martin Relocates

Dr. John R. (Jack) Martin is now associated with Dr. Billy V. Hall and Dr. John L. Garrett in Gravette. Dr. Martin moved to Gravette from Siloam Springs, where he had been in practice for the past eight and one-half years.

### Medical Staff Officers Named

Medical staff officers of Sparks Regional Medical Center in Fort Smith for 1973 are: Dr. E. Z. Hornberger, chief of staff; Dr. W. P. Phillips, to serve as chief of staff in 1974; and Dr. Neil Crow, secretary of the executive committee. The executive committee is made up of the officers and the chiefs and vice chiefs of service. Chiefs and their services are: Dr. John D. Olson, surgery; Dr. William Turner, medicine; Dr. Alfred Hathcock, orthopaedics; Dr. Homer Ellis, obstetrics and

gynecology; Dr. Robert Thompson, general practice; Dr. Morton Wilson, urology; Dr. R. C. Goodman, anesthesiology; Dr. A. S. Koenig, pathology; Dr. John Broadwater, radiology; and Dr. S. R. McEwen, eye, ear, nose and throat. Vice chiefs include Dr. E. E. Clemons, surgery; Dr. Lawrence Price, medicine; Dr. P. J. Irwin, ortho-

paedics; and Dr. J. F. Kelsey, obstetrics and gynecology.

#### **Dr. Buie Named Fellow**

Dr. James Buie of Fort Smith was named a Fellow of the American Academy of Orthopaedic Surgeons at that group's annual meeting, February 1-6, 1973, in Las Vegas.



## **MEDICINE IN THE**



### **THE MONTH IN WASHINGTON**

New faces will be leading the nation's major governmental health programs in President Nixon's second term in office.

At the helm of the Department of Health, Education and Welfare will be a new kind of secretary, a man with a reputation as a budget slasher with a zeal for protecting the taxpayers' dollar.

Casper Weinberger will be the first HEW secretary schooled in the money world of fiscal prudence. Nicknamed "Cap the Knife," the appointment of Weinberger to run the government's social welfare, health and educational programs perhaps marks the President's most daring cabinet decision.

Selection of the 55-year-old California lawyer seems to be proof of the President's intention to reverse the tide of heavier federal welfare spending, to channel more money and responsibilities to states and localities, and to steer away from the European welfare state concept.

Weinberger will be moving over to HEW from the post of director of the White House Office of Budget and Management, a cabinet post but one where Weinberger was able to function in the comparative anonymity he has preferred to date. At HEW he will be thrust into the limelight and in short time will become one of the best known public figures in the nation.

Despite its reputation as a wrecker of reputations, the HEW Department secretaryship has served most of its occupants well. Outgoing Secretary Elliot Richardson was elevated to the more powerful and prestigious post of defense secretary. Abraham Ribicoff, who despaired of presiding over the "can of worms" at HEW, found his tenure there no handicap in his race for the Senate.

Ribicoff will be one of the senators present at the Senate Finance Committee confirmation hearing in January on Weinberger's nomination. The confrontation between Ribicoff and Weinberger promises to be an interesting exchange as Weinberger outlines his views on his new position and Ribicoff contributes his advice.

Few fireworks are expected at the confirmation hearing. No committee on Capitol Hill is more conscious of the waste and duplication at HEW than Senate Finance which has a membership considerably more conservative than the Senate as a whole.

Weinberger undoubtedly will give a good picture of his general views and philosophies during his appearance. If he follows tradition, a more detailed explication will be made at a news conference after he is confirmed and sworn in as HEW Secretary.

Weinberger is no stranger to the operations of HEW. At the Budget Office he became well

acquainted with the finances of HEW and indeed in tandem with the White House exerted extraordinary fiscal powers over federal health programs.

Weinberger's appointment may end a chafing dichotomy between the White House staff and the White House OMB on the one hand and HEW on the other. As a loyal Administration servant, Richardson was willing to put up with the situation while it lasted but it is doubtful he would have remained compliant much longer.

There's little question that Weinberger is going to propose HEW cuts that will enrage some congressmen, but on the whole the expectation here is that he won't be easily categorized except perhaps as a pragmatist.

He has noted for example, that more than 71 per cent of federal expenditures are for things over which the Administration has no control—such items as interest on the national debt, Medicare, and veterans compensation.

\* \* \*

John G. Veneman, the number two man at HEW, has also announced his resignation, presumably with an eye to running for lieutenant governor of California.

Veneman was a frequent spokesman for HEW before the Congress before he became under secretary of Health, Education and Welfare in 1969 at the request of then-HEW Secretary Robert H. Finch.

Frank C. Carlucci, the former director of the Office of Economic Opportunity who now is deputy director is in line to replace Veneman. Carlucci was number two man in the Office of Management and Budget to Caspar Weinberger.

Carlucci's place in the Office of Management and Budget will be taken by Fred Malek, the Nixon Administration troubleshooter who now heads recruiting efforts in the reshuffle taking place before the President's second term.

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Also departing from the command line-up at HEW are Assistant Secretary for Health and Scientific Affairs, Merlin DuVal, M.D., and Vernon Wilson, M.D., chief of Health Services and Mental Health Administration, the largest operating branch of HEW.

Dr. DuVal, whose resignation comes 16 months after his appointment, returns to the University of Arizona where he will be vice-president for medical affairs. Dr. Wilson returns to the Uni-

versity of Missouri Medical School after guiding HSMHA since May, 1970.

Dr. DuVal believes that the administration of health programs have been tightened and control over the various health agencies strengthened during his tenure. He gives HEW Secretary Elliot Richardson credit for moving in this direction, though he helped institute much of the change. DuVal also significantly broadened HEW's health liaison with other federal departments.

Dr. Wilson carried out a sweeping reorganization of HSMHA, focusing management in his office and among his deputies. He was given high marks for bringing order out of an amorphous spread of agencies.

In neither case were the resignations of DuVal and Wilson the result of any pressure from above. The Administration wanted both physicians to stay on.

The departures of DuVal and Wilson will give new HEW Secretary Caspar Weinberger two important health slots to fill. These slots in all likelihood will not be filled until after new HEW Secretary Caspar Weinberger is confirmed by the Senate and sworn into office, probably in January.

\* \* \*

The firing of Robert Q. Marston, M.D., Director of the National Institutes of Health and the only top holdover from the Johnson Administration, prompted some angry reaction from Congress and stunned surprise from the medical academic community. No reason was given for the President's acceptance of Dr. Marston's pro-forma resignation.

Rep. Paul Rogers (D., Fla.), head of the House Health Subcommittee, commenting on the Marston firing, said "every top health administrator now has either resigned or been relieved. This latest announcement precludes any hope of continuity in the health field on the federal level with more than a dozen pieces of health legislation coming up."

Dr. Marston had built strong ties with Congress and the academic research community since he succeeded James Shannon, M.D., at NIH in 1968. NIH's appropriations rose to \$2.1 billion with broad new programs on cancer and heart research added in the past two years.

John Twiname, Administrator of HEW's Social Rehabilitation Service (Medicaid), also

had his pro-forma resignation accepted by the President.

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There was no great surprise, however, when the White House announced the resignation of Jesse Steinfeld, M.D., as Surgeon General of the Public Health Service.

The 45-year-old Dr. Steinfeld, a career PHS officer who has held the Surgeon General's post since 1969, may be the last man to fill the position. The Administration has made clear its intent to abolish the PHS's Commissioned Corps. In the past several years the Surgeon General has been divested of most of his authority, and the hopes of the PHS Commissioned Corps that it might be revived have faded.

With the massive resignations and firings, only Charles Edwards, M.D., Food and Drug Administration Commissioner, now remains of the old guard.

\* \* \*

After 16 months of deliberation marred with dissension, a federal advisory commission has decided not to recommend any single solution to the problem of medical malpractice insurance. The gist of the divided commission's report to HEW is to explore a variety of ways to modify malpractice laws at the state level.

Nothing that will be submitted in the commission's final report to the HEW secretary by the first of the year apparently would have much effect on the rising costs of malpractice insurance, the growing number of claims, and the resulting impact on physician's fees.

Any hopes that some sort of a consensus might be attained in the year and half since the commission's formation were dashed at its final meeting when members aired their disagreements over various aspects of the report.

The clash for the most part involved spokesmen for physicians and insurance companies on the one hand, and lawyers' groups and consumer organizations on the other. A strong minority report was expected challenging the brunt of the final findings.

The report by the 21-member committee is strictly advisory. The HEW secretary is not required to make any legislative proposals on the basis of it. Unless HEW has some legislative recommendations in the works, it appears doubtful the Administration will seek any changes in

malpractice statutes as part of its legislative health package this year.

One of the more controversial findings of the commission was the suggestion that the contingent fee system actually hinders litigants with small malpractice claims and a suggestion that there should be public legal assistance for those with small claims. The report did not recommend abolition of the contingent fee system.

Carl A. Hoffman, M.D., AMA President and a member of the commission, has submitted to the commission some forty pages of comments that address themselves to a number of shortcomings contained in the report.

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The director of the Federal Drug Administration's Bureau of Drugs has charged before a Senate subcommittee that physicians are over-prescribing antibiotics, resulting in an increased number of "resistant strains of bacteria and an increased number of superinfections."

"There may be 100 to 300 thousand cases each year of blood poisoning from superinfections, of which 30 to 50 per cent are fatal," according to testimony before the Senate Small Business' Subcommittee on Monopoly by Henry E. Simmons, M.D.

Harry F. Dowling, M.D., emeritus professor of medicine, University of Illinois, said "it is doubtful the average person has an illness that requires treatment with an antibiotic more often than once every five or ten years." Antibiotic production has needlessly increased, however, in the past ten years, he said.

The physician's fear of failure to help his patients—stronger than his fear of complications—motivates him to prescribe antibiotics, suggested Calvin M. Kunin, M.D., of the University of Wisconsin School of Medicine.

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More than 1300 persons have died from narcotics abuse in New York City this year, that city's chief deputy medical examiner told a conference on the "Medical Complications of Drug Abuse" sponsored in Washington by the AMA's Committee on Alcoholism and Drug Dependence.

Michael M. Baden, M.D., said that heroin addiction has become the leading cause of death among persons between the ages of 15 and 35 in New York. At the same time, more than 30 per cent of narcotic deaths in the city have been

associated with methodone use—both legal and illegal, Dr. Braden said.

White House physician William M. Lukash, M.D., served as coordinator of the all-day conference that attracted more than 500 physicians to the nation's capital to hear leading drug experts describe the problems involving addicts.

Dr. Baden told the conference that during the past decade, the growing abuse of drugs has been reflected by a "marked increase" in narcotic deaths (from 109 in 1960), a decrease in the median age of death from 31 in 1960 to 23 today, and a change in the pattern of drug abuse from heroin alone to multiple drugs, most recently methodone.

"The drug addict seen today in the emergency room for an 'overdose' cannot be presumed to have taken only heroin—or heroin at all," Dr. Baden told the conference. "We see too many addicts at autopsy who were sent home after 'responding' to an injection of nalorphine and died shortly thereafter because methodone or barbiturates had also been taken."

J. Willis Hurst, M.D., recent past president of the American Heart Association, told the conference that a preliminary survey indicates that drug abusers' contaminated needles are now one of the leading causes of bacterial endocarditis in the nation.

Dr. Hurst, chairman of the department of medicine at Emory University in Atlanta, said that bacterial endocarditis, an infection of the heart lining, is a serious disease in itself but it also greatly increases a drug user's risk of death if he must undergo heart surgery.

A panel of specialists on the liver disclosed that the amount of hepatitis associated with drug abuse is still rising but that many drug users display no symptoms of the disease and thus are able to sell their diseased blood to collection centers.

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Methodone will be distributed only through hospital pharmacies, approved maintenance programs, and certain drug stores in rural areas, under newly tightened regulations announced by the Food and Drug Administration.

Effective immediately, FDA is requiring patients to have been addicted to heroin at least two years before participating in a methodone-maintenance program. Enrollment of minors will be limited.

Patients 16 to 18 may remain in current programs, FDA said, but no additional minors may be admitted unless a consent form is signed by a parent, legal guardian, or a state-designated authority.

The new rules require patients of treatment centers to take the drug daily at the center, under observation, for the first three months. If they show satisfactory progress, they will be allowed to take home two-day supplies, and after two years, three-day supplies.

The new restrictions are necessary to curb "a growing problem of abuse and diversion of methodone," said FDA.

While announcing the unique closed system of methodone distribution, FDA also said methadone marketing permits of eight drug companies will be revoked.

"It is not in the public interest, either to withhold the drug from the market until it has been proved safe and effective under all conditions," said FDA Commissioner Charles C. Edwards, M.D., "or to grant full approval for unrestricted distribution, prescription, dispensing or administration of methodone."

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#### **UPGRADING OF X-RAY EQUIPMENT**

The Food and Drug Administration's Bureau of Radiological Health has recently learned that some x-ray equipment dealers have been advising physicians and other users that all existing x-ray equipment will have to be upgraded by August 15, 1973, to meet requirements of the radiation safety performance standard for diagnostic x-ray equipment which becomes effective on that date. The Bureau states that such advice is contrary to fact.

Upgrading of x-ray equipment now being used is not now required by the standard. State and territorial radiation control authorities have been asked by the Bureau to so inform equipment users and dealers. They point out, however, that although equipment now in use will not have to be modified before the standard becomes effective, owners installing manufacturer-certified components in such x-ray systems after next August 15 must install components of the type called for by the Federal standard.

For further information about the standard write the Division of Electronic Products, Bureau of Radiological Health, Food and Drug Adminis-

tration, 12720 Twinbrook Parkway, Rockville, Maryland 20852.

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Dr. Joe Bill Hall of Fayetteville was a member of a panel on the quality of medical care during a Statewide Conference on Assurance of Health Care in Hot Springs on January 30th and 31st arranged by the Regional Medical Program.

Dr. Hall developed the idea that the quality of health care depends directly on the quality of the doctor. He ended his talk with the following:

"If government control, government audit or Peer Review is going to improve quality medical care, if indeed quality medical care depends upon quality doctors, then it must be designed to increase that doctor's self-respect and that doctor's self-confidence.

I think, ladies and gentlemen, that we could have gotten a bulldog to go bird hunting with. It may be that we have decided that we're going to take a bulldog and we're going to teach him to hunt birds. And if any of you are bird hunters, you know that's a pretty sad situation. Because the bulldog is stubborn—he's immovable, he's tenacious and, not only that, he can't smell birds.

Some of these problems, I am afraid, cannot be solved by what we are trying to do. And—I would like to suggest to you, particularly if there is anyone here who represents the Medical School—that if you are going to start out or end up with quality in a doctor, that you've got to look for the quality before you admit him to medical school. You don't pick a bulldog and decide to make a bird dog out of him. They just aren't bred that way.

And I think as individuals, as consumers, as just citizens, that we must become interested in what kind of doctors this country has produced. Now I would like to suggest to you that, at the present time, a man's pre-medical academic background is considered more important than his pre-medical spiritual background. This is the assumption that we are working on. Medical schools are saying a man's pre-medical academic background is more important than his pre-medical spiritual background. Secondly, they are saying that a man's intelligence is more important than his motivation and his dedication. And every doctor in this room who's honest knows that it doesn't take brains to be a doctor. It just takes lots of guts. A man's intelligence is

more important than his motivation and his dedication. These are the principles we are working on. Thirdly, and this is a timely one, freedom of thought and action is more important than self-discipline. This is what our medical schools and our educational system is saying. Freedom of thought and action is more important than self-discipline.

Well, I suppose I haven't answered any questions and perhaps, and hopefully, I have raised some questions in your minds. Because, as a practicing physician, I'm not opposed to Peer Review, I'm for it. I'm not opposed to anything that improves the quality of health care. I'm for it. But I have wondered, as I look out over what I see, if we haven't started at the top, instead of at the bottom, to build a house."

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#### ROBINS MAKES CONTRIBUTION

For the second consecutive year, the A. H. Robins Company has, without solicitation, forwarded a check for \$200 for use by the Arkansas Medical Society for furthering its professional or educational programs. No conditions or requirements were attached to the donation. The letter accompanying the check follows:

"Dear Mr. Schaefer:

With the start of 1973, I want to extend to you and the Arkansas Medical Society best wishes for a successful and productive year.

As we begin our programs for the new year, we are well aware that increasing interest in health care and continuing advances in medicine highlight the need to communicate effectively with all concerned. Professionals, legislators, regulatory agencies, business and the general public all have become increasingly important in our communications efforts, just as they have in yours.

The expansion of our efforts and the wish to express our views on vital issues entail expenditures from year to year. We have sought to provide financial assistance to your organization through advertising in your journal and by helping with other special activities.

Our efforts to enhance the "image" of the medical profession through our Physician Award Program provide public recognition to individual doctors who have rendered outstanding community service. This program has proved most successful in many states, and we sincerely hope

those state medical associations which are not currently partners in this effort will participate in the future.

Again this year we are augmenting our previous support to your endeavors. Since we do not know which specific areas command the greatest need, we are enclosing our company check for Two Hundred Dollars (\$200) for use in furthering such professional or educational programs as you feel will be of the greatest benefit.

All of us at the A. H. Robins Company want to take this opportunity to express our appreciation to you and your colleagues as you continue to serve the profession in Arkansas.

Sincerely,  
/s/ E. Claiborne Robins  
E. Claiborne Robins  
Chairman of the Board and  
Chief Executive Officer  
A. H. Robins Company"

**STATE MEDICAL ASSISTANTS  
MEETING PLANNED**

The 19th annual convention of the Arkansas State Chapter of the American Association of Medical Assistants will be held May 4, 5, and 6, 1973, at the Holiday Inn South, in Fort Smith. All medical assistants throughout the State are

invited to attend. Inquiries regarding the meeting should be directed to Miss Mary Nell Euper, Convention Chairman, 1214 North "B" Street, Fort Smith, Arkansas 72901. The convention agenda is as follows:

**FRIDAY, MAY 4, 1973**

12:00 Noon- 6:00 P.M.	Registration
2:30 P.M.-4:30 P.M.	House of Delegates Meeting
7:30 P.M.	Warm Up Party Home of Mr. Paul Schaefer—Host Executive Vice President Arkansas Medical Society State Advisor Muldrow, Oklahoma

**SATURDAY, MAY 5, 1973**

8:30 A.M.- 4:00 P.M.	Registration
8:30 A.M.	Continental Breakfast Hostess: Woman's Auxiliary to the Arkansas Medical Society
10:00 A.M.-10:50 A.M.	Dr. J. Earle White—"Endocrinology" 320 North Greenwood Fort Smith, Arkansas Introduction—Elizabeth Doss
10:00 A.M.-10:50 A.M.	Dr. Leon Woods—"Coronary Bypass" Holt Krock Clinic Introduction—Jan Floyd, Dr. Woods' Nurse
11:00 A.M.-11:50 A.M.	Skit—Office Problems—Involving Audience Edith Crane 1972-73 State Secretary Little Rock, Arkansas
12:15 P.M.- 1:15 P.M.	Luncheon Invocation—Betty Stipsky, President-elect Welcome—Mayor Jack Freeze Door Prizes—Betty Stipsky Presiding—Deany Reid, President

MEDICINE IN THE NEWS

1:30 P.M.- 2:30 P.M.	Mr. Eldon Coffman Dailey, Core, West & Coffman Attorneys at Law, Fort Smith
2:45 P.M.- 3:45 P.M.	Dr. Wright Hawkins—"Carcinoma of the Breast" Cooper Clinic, Fort Smith
4:00 P.M.- 4:30 P.M.	Arkansas Blue Cross & Blue Shield
4:30 P.M.- 6:30 P.M.	Free time
6:30 P.M.- 7:30 P.M.	Cocktail Party—Hosted by Bristol Laboratories
7:30 P.M.- 8:30 P.M.	Banquet Invocation—Dr. W. C. Holmes, Cooper Clinic (State Advisor '72) Welcome—Mary Nell Euper Master of Ceremonies—Mr. Mort Enright, Director of Leadership Programs, American Medical Association, Chicago Presiding—Deany Reid, President
9:00 P.M.- 1:00 A.M.	Dance-Band—"Moonlighters" from Clarksville, Arkansas

**SUNDAY, MAY 6, 1973**

9:00 A.M.-10:00 A.M.	Registration
9:00 A.M.	Breakfast Host: Blue Cross & Blue Shield
10:00 A.M.-10:15 A.M.	General Assembly, Deany Reid, President—Presiding Devotional—Dr. Paul Rogers, 318 North Greenwood, Fort Smith
10:15 A.M.-10:45 A.M.	Dr. E. S. McCarty, Ph.D.—"Beatitudes of Mental Health or Managing Your Marbles" Brentwood Hospital, Shreveport, Louisiana
10:45 A.M.-11:15 A.M.	Dr. John Woods, 1973-74 President, Arkansas Medical Society "Changes in Medicine" Mena, Arkansas
12:00 Noon	Luncheon and Installation of Officers Presiding—Deany Reid, 1972-73 President Invocation—Phyllis Haley—Texarkana, Arkansas Installation—Dr. Jerry Holton—Advisor, Sebastian County Fort Smith, 318 North Greenwood 1973-74 President's Message—Betty Stipsky, Cooper Clinic Fort Smith Door Prizes





## NEW MEMBERS

### **Dr. Donald Harris Pennington**

Dr. Donald H. Pennington is a new member of the Johnson County Medical Society. He was born in Clarksville, Arkansas.

Dr. Pennington received his B.A. Degree from the College of the Ozarks in 1968, and was graduated from the University of Arkansas School of Medicine in 1972. He is presently receiving internship training at St. Vincent Infirmary. After July 1st, Dr. Pennington will be associated with the Clarksville Medical Group, 600 Lucas Street, Clarksville.

### **Dr. Maurice Leonard Stephens**

Dr. Maurice L. Stephens is a new member of the Johnson County Medical Society. A native of Texarkana, Dr. Stephens received his pre-medical education at Baylor University, receiving his B.A. degree in 1965, and the Hermann Hospital School of Medical Technology. He was graduated from the University of Arkansas School of Medicine in 1972 and is now in internship training at St. Vincent Infirmary. Following completion of his training, Dr. Stephens will be associated with the Clarksville Medical Group, 600 Lucas Street, Clarksville.

### **Dr. Olie D. Brown, Jr.**

Dr. Olie D. Brown, Jr., a native of Memphis, is a new member of the Sevier County Medical Society.

Dr. Brown attended the University of Mississippi and the University of Arkansas School of Medicine, graduating in 1965 and 1969, respectively. He received his internship training at St. Vincent Infirmary.

A family practitioner, Dr. Brown is associated with the Dickinson Clinic, 302 North 4th Street, DeQueen.

### **Dr. Joe D. Daugherty**

Dr. Joe D. Daugherty is a new member of the Sevier County Medical Society. He was born in Arkadelphia.

In 1965, Dr. Daugherty received his B.S. degree from the University of Arkansas, and in 1969 he received his M.D. degree from the University of Arkansas School of Medicine. He completed his internship at Baptist Medical Center, Little Rock.

Dr. Daugherty is a family practitioner. He is associated with the Dickinson Clinic, 302 North 4th Street, DeQueen.

### **Dr. John Louis Gustavus**

Dr. John L. Gustavus, a native of Warren, is a new member of the Sevier County Medical Society.

He received his pre-medical education at Ouachita Baptist College and the University of Arkansas. He was graduated from the University of Arkansas School of Medicine in 1968 and completed his internship at St. John's Hospital in Tulsa.

A family practitioner, Dr. Gustavus is associated with the DeQueen Clinic, Highway 70 West, DeQueen.



### **Contamination of Ultrasonic Nebulization Equipment With Gram-Negative Bacteria**

E. R. Rhoades et al (VA Hosp, Oklahoma City 73104)

*Arch Intern Med* 127: 228-232 (Feb) 1971

Aerosol sampling of ultrasonic nebulizers (USN) during routine use revealed significant contamination by gram-negative bacteria in each instance. Exposure of a sterile USN machine to a patient harboring *Serratia* in sputum resulted in heavy growth of *Serratia* in all parts of the USN after 48 hours. Acetic acid in a concentration of 0.25% was not effective in cleaning heavily contaminated machines, whereas 2% acetic acid for 30 minutes rendered the USN bacteria free. The USN are hazardous insofar as they contain water reservoirs in which certain gram-negative organisms multiply rapidly.



## OBITUARY

### Dr. Charles William Hall

Dr. Charles W. Hall of Greenwood died January 16, 1973, at the age of 83. Dr. Hall was graduated from the University of Arkansas School of Medicine and began his practice of medicine in Greenwood in 1915. He retired in 1972.

He was a Life Member of the American Medical Association, the Arkansas Medical Society, and the Sebastian County Medical Society. Dr. Hall was a past president of the Sebastian County Medical Society and the Tenth Councilor District Medical Society. He served as Sebastian County Health Officer of the Greenwood District for forty-eight years. He served on the Greenwood City Council and was a member of the Greenwood School Board for fifteen years, serving as athletic department physician for several years.

Dr. Hall was a member of the First Baptist Church and served as a deacon for fifty years. He was a Mason.

He is survived by his wife, Minnie, one son, one daughter, two brothers, two sisters, and one grandson.

\* \* \*

### Dr. Jack Murff Sheppard

Dr. Jack M. Sheppard of El Dorado died January 17, 1973, in Shreveport, Louisiana. He was born May 6, 1917, in Haughton, Louisiana.

Dr. Sheppard was graduated from the Louisiana State University School of Medicine in 1940. He began his practice in El Dorado in 1945, following his discharge from the United States Air Corps.

He was a member of the Arkansas Medical Society, the Union County Medical Society and a staff member of both the Union Memorial and Warner Brown Hospitals.

Dr. Sheppard was a member of the United

Methodist Church. He was a Mason and a Shriner.

Survivors include his wife, Genevieve, three sons, and one daughter.

\* \* \*

### Dr. Morgan Henry Scott

Dr. Morgan H. Scott of Fort Smith died February 9, 1973. He was eighty-two years of age.

Dr. Scott received his medical education at the Kansas City College of Medicine and Surgery, graduating in 1921. He was a Life Member of the American Medical Association, the Arkansas Medical Society, and the Sebastian County Medical Society. He was a veteran of World War I.

Dr. Scott is survived by his wife, Martha, one son, four brothers, three sisters, and four grandchildren.

\* \* \*

### Dr. Richard C. Dickinson

Dr. Richard C. (R. C.) Dickinson of Horatio died February 14, 1973. He was born in Lampasas County, Texas, May 11, 1888, and had lived in Horatio since 1890.

Dr. Dickinson attended the University of Arkansas and was graduated from the University of Arkansas School of Medicine in 1917, winning the Buchanan award for his class. Dr. Dickinson practiced in Horatio until the early 1950's when he and his sons, Dr. Rodger Dickinson and Dr. R. B. (Bill) Dickinson, established the Dickinson Clinic in DeQueen.

Dr. Dickinson was active in the Arkansas Medical Society. He served as a Councilor from the Sixth District from 1944 through 1952, as a delegate to the State Society, in the various county society offices, and on many Society committees. He served as President of the Arkansas Medical Society in 1953-54 and was named a "Distinguished Alumnus" of the University of Arkansas in 1953. Dr. Dickinson was an original member of the Blue Cross-Blue Shield organization committee and served as a member of the Board of that organization. He was a member of numerous civic clubs and was active in community affairs.

Dr. Dickinson is survived by his wife, Belle, and six children.



## RESOLUTIONS



### RESOLUTION

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of their colleague, Nicholas William Riegler, Sr.; and

WHEREAS, Dr. Riegler had been an honored member of this Society for fifty-six years; and

WHEREAS, Dr. Riegler's contribution to the medical care of the people of this area for such a long period of time is one of enviable record;

BE IT THEREFORE RESOLVED:

THAT, this resolution be made a part of the permanent records of the Society; and

THAT, a copy of this resolution be forwarded to the family of Dr. Riegler as an expression of deepest sympathy; and

THAT, a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication.

By Direction of the Memorials Committee

T. Duel Brown, M.D., Chairman

Robert Watson, M.D.

Henry Hollenberg, M.D.

Approved: Executive Committee

January 17, 1973



### ANSWER—Electrocardiogram of the Month

There are two different rhythms: a sinus rhythm with upright P-Waves in leads I and II, and iso-electric in III at a rate of about 100/min. and an ectopic rhythm, occurring in paroxysms with inverted P-Waves in II, III, AVF at a rate of approximately 150/min. The bouts of tachycardia are initiated with an atrial premature beat—biphasic wave in II—This probably produces partial depolarization of the A-V junctional tissue allowing the re-entry circus tachycardia to emerge. There is slight cycle oscillations in P-R intervals during the tachycardia . . . a finding consistent with a reciprocating tachycardia. On the basis of selective changes in the P-R intervals during various physiologic maneuvers, it was possible to establish that the re-entry mechanism in this patient was located above the A-V node. ST-T changes in beats following paroxysms of tachycardia are difficult to evaluate. The ST-T wave depression noted here may be a result of the tachycardia, digoxin, or some underlying condition predisposing the electrical instability as well.



## PROCEEDINGS OF SOCIETIES

### Sevier County Medical Society

Officers of the Sevier County Medical Society elected to serve during 1973 are: Dr. Rodger Dickinson, president; Dr. Michael Buffington, vice president; Dr. John L. Gustavus, secretary; Dr. James I. Balch, delegate; and Dr. Joe D. Daugherty, alternate delegate.

### Fifth Councilor District Medical Society

The Fifth Councilor District Medical Society held its annual meeting January 15th in El Dorado. Dr. George A. Pankey, of the Ochsner Clinic in New Orleans, was the featured speaker. Dr. Robert Abernathy, Professor and Chairman of the Department of Medicine, University of Arkansas School of Medicine, was also a guest speaker.



### Preliminary Evaluation for Primary Aldosteronism

E. G. Biglieri (San Francisco General Hosp, San Francisco 94110), J. R. Stockigt, and M. Schambelan

*Arch Intern Med* 126:1004-1007 (Dec) 1970

Oral administration of 400 $\mu$ g of fludrocortisone acetate for three days suppresses aldosterone production in normal subjects with minimal effect on the excretion of Porter-Silber chromogens. Administration of fludrocortisone acetate to hypertensive patients with hyperaldosteronism suppressed aldosterone production into the normal range in all patients with essential hypertension and in one patient with adrenal nodular hyperplasia, but failed to do so in the patients with aldosterone-producing adenoma or nodular hyperplasia, confirmed subsequently. Administration of fludrocortisone acetate to hypertensive outpatients with hyperaldosteronism is an effective screening procedure for further evaluation of primary adrenal disease.

# ANNUAL MEETING PROGRAM

April 1-4, 1973

Hot Springs



## **CONVENTION OFFICIALS**

**GENERAL CHAIRMAN:** G. Thomas Jansen, M.D., Little Rock

**CO-CHAIRMAN:** Joseph L. Rosenzweig, M.D., Hot Springs

**PROGRAM COMMITTEE:**

Winston K. Shorey, M.D., Little Rock

Gilbert S. Campbell, M.D., Little Rock

W. T. Dungan, M.D., Little Rock

Louis R. McFarland, M.D., Hot Springs

George F. Wynne, M.D., Warren

Charles D. Cyphers, M.D., El Dorado

A. S. Koenig, M.D., Fort Smith

Dwight W. Gray, M.D., Marianna

**DISTRICT HOSTS: SIXTH COUNCILOR DISTRICT**

Karlton H. Kemp, M.D., Texarkana, Councilor

C. Lynn Harris, M.D., Hope, Councilor

**SCIENTIFIC EXHIBITS CHAIRMAN:** Ashley S. Ross, Jr., M.D., Little Rock

**CO-CHAIRMAN:** Charles W. Logan, M.D., Little Rock

**GOLF TOURNAMENT COMMITTEE:**

C. Lynn Harris, M.D., Hope, Chairman

Allie E. Andrews, Jr., M.D., Texarkana

**MEMORIAL SERVICE CHAIRMAN:** Marion H. Wilmoth, M.D., Nashville

# *Digest Of Events*

## **REGISTRATION**

The registration desk will be located on the Mezzanine of the Arlington Hotel and will be open as follows:

Sunday, April 1	8:00 A.M. to 5:00 P.M.
Monday, April 2	8:00 A.M. to 5:00 P.M.
Tuesday, April 3	8:00 A.M. to 5:00 P.M.
Wednesday, April 4	8:00 A.M. to 12:00 Noon

Registration cards and badges will be prepared in advance for the officers of the Arkansas Medical Society and for the county society delegates. Delegates are requested to present credentials in proper form when registering.

All members and visitors are required to register, as admission to all sessions will be by badge only. Bring your 1973 membership card to facilitate registration.

There will be a \$5.00 registration fee for non-member physicians.

Tickets for the Tuesday night cocktail party and banquet may be purchased at the registration desk.

## **TELEPHONE SERVICE**

A special convention telephone will be installed at the Society's registration desk. The telephone number will be 624-7600. Give this number to your office personnel so that they may contact you in case of an emergency.

## **MEETINGS OF THE COUNCIL**

The Council of the Arkansas Medical Society will meet as follows:

Sunday, April 1	10:00 A.M.
Monday, April 2	7:30 A.M.
Tuesday, April 3	7:30 A.M.
Wednesday, April 4	9:00 A.M.
Wednesday, April 4	Immediately following the adjournment of the House of Delegates (Brief re-organizational meeting and group photograph of new officers)

The voting members of the Council are: the councilors, the president, the first vice president, president-elect, secretary and treasurer. The speaker, vice speaker, and past presidents are members ex-officio without vote.

## **HOUSE OF DELEGATES**

The opening session of the House of Delegates of the Arkansas Medical Society will be called to order at 1:00 P.M. on Sunday, April 1, in Room "C" of the Conference Center, Arlington Hotel.

The closing session and election of officers will begin at 10:00 A.M. on Wednesday, April 4, in the same room.

All items of business will be referred by the Speaker of the House of Delegates to three reference committees. Open hearings on all resolutions and reports will begin at 3:30 P.M. on Sunday, April 1. Any member of the Arkansas Medical Society is welcome to attend the meetings of the reference committees and to express views on the various reports, resolutions, etc. After the open hearings the

## **ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

reference committees will go into executive session for the purpose of preparing reports and recommendations to the House of Delegates.

All items of business to be considered by the House must either be printed in the March issue of the Journal or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during sessions of the House must have two-thirds vote of attending delegates for introduction.

### **SCIENTIFIC SESSIONS**

The scientific program of the annual meeting will be presented on Monday and until noon on Tuesday. Distinguished speakers from various medical centers across the Nation will present lectures. All convention visitors enter the lecture hall through the exhibit area.

Section and specialty group meetings will be held on Tuesday afternoon. The Association of Tumor Clinic Staff Members in Arkansas will hold a luncheon meeting on Monday and the Anesthesiologists will meet for a Monday luncheon.

The complete program for the annual meeting begins on page 316.

### **TECHNICAL AND SCIENTIFIC EXHIBITS**

Thirty-eight displays by firms whose products and services are of interest to Arkansas physicians will be housed in the Conference Center of the Hotel on the Mezzanine floor level.

In addition, there will be scientific and industrial exhibits in the adjacent area of the Conference Center. A complete list of the scientific and technical exhibits appears on pages 327 to 329. Exhibit hours are from 8:00 A.M. to 5:00 P.M. on Monday and Tuesday.

### **FREE COFFEE**

The Arkansas State Medical Assistants Society will serve coffee in the exhibit area of the Conference Center. Members are urged to visit the medical assistants for a cup of coffee and discussion of the medical assistants' organization.

### **GOLF TOURNAMENT**

The annual golf tournament in connection with the convention will be at the Hot Springs Golf and Country Club. Physicians may play Monday or Tuesday, April 2nd and 3rd. Participants may pay the fee at the club. There will be prizes.

On Wednesday afternoon, April 4th, there will be a husband-wife combination and participants may have dinner at the club.

Wives of physicians are also welcome for golf at the club on Monday and Tuesday. Information on golf for the ladies will be available at the Auxiliary convention registration desk on the mezzanine lobby at the Arlington.

### **SUNDAY EVENING RECEPTION**

The Council will host a reception for all members, wives, and guests of the Arkansas Medical Society at 6:30 P.M. on Sunday, April 1st, in the Arlington

## **ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

Hotel. All members are encouraged to attend and become better acquainted with the officers of the Society.

### **SENIOR MEDICAL STUDENT DAY AT THE ANNUAL SESSION**

Senior medical students will be invited to attend the Scientific Session on Monday, April 2nd.

A 12:00 luncheon, to be hosted by the Arkansas Medical Society, is planned for the students that day.

### **MONDAY EVENING PARTY**

Arkansas Blue Cross-Blue Shield will host an informal "shrimp and beer" party on Monday evening for all members of the Arkansas Medical Society and special guests. The party will be held at the Hot Springs Golf and Country Club, beginning at 7:00 P.M.

### **FIFTY YEAR CLUB BREAKFAST**

The Society will host a breakfast for members of the Fifty Year Club at 7:30 A.M. on Tuesday, April 3rd, in the Arlington Hotel. Members of the Fifty Year Club may make reservations for the breakfast at the Society's convention registration desk. Guest speaker will be Henry V. Kirby, M.D. of Harrison, chairman of the Arkansas Medical Society's Medical Museum Committee. Dr. Kirby will speak on "Medical Museums".

Dr. D. B. Stough of Hot Springs is president of the Fifty Year Club and Dr. G. Allen Robinson of Harrison is secretary.

### **MEMORIAL SERVICE**

A joint Society-Auxiliary Memorial Service will be held on Tuesday, April 3rd, at 11:30 A.M., in the Ballroom of the Arlington Hotel.

### **TUESDAY EVENING COCKTAIL PARTY**

A cocktail party will precede the Inaugural Banquet on Tuesday evening, beginning at 6:00 P.M. The party will be held in Room "C" of the Conference Center. Tickets will be on sale at the convention registration desk.

### **PRESIDENT'S INAUGURAL BANQUET**

The social highlight of the 1973 annual session will be the President's Inaugural Banquet on Tuesday evening, April 3rd, in the Crystal Ballroom of the Arlington Hotel, beginning at 7:00 P.M.

The Society President, Dr. Robert Watson, will act as master of ceremonies.

Dr. John P. Wood will be installed as president for 1973-74.

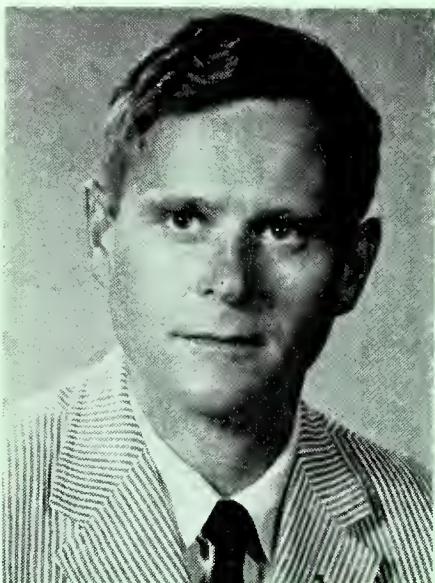
The Arlington Hotel orchestra will play for dancing in the Hotel Ballroom following the banquet.

Tickets for the banquet will be available at the Society's convention registration desk.

### **PAST PRESIDENT'S BREAKFAST**

The traditional breakfast for former presidents of the Arkansas Medical Society will be held at 7:30 A.M. on Wednesday, April 4th, in the Arlington Hotel.

## Distinguished Guest Speaker



F. STANLEY PORTER, M.D.  
Professor of Pediatrics,  
Pediatric Hematology  
Duke University Medical Center  
Durham, North Carolina



BILL TRANUM, M.D.  
Assistant Professor of Medicine  
Division of Hematology and Oncology  
University of Arkansas School of Medicine



LAMAN A. GRAY, M.D.  
Clinical Professor of Obstetrics  
and Gynecology  
University of Louisville School of Medicine  
Louisville, Kentucky

MICHAEL E. GLASSCOCK, M.D., F.A.C.S.  
Otology and Neuro-otology  
Nashville, Tennessee  
(PHOTO NOT AVAILABLE)

FRANK AGEE, M.D.  
Professor of Radiology  
University of Florida College of Medicine  
Gainesville, Florida  
(PHOTO NOT AVAILABLE)

MERLIN L. TRUMBULL, M.D.  
Associate Director,  
Department of Pathology  
Baptist Memorial Hospital  
Memphis, Tennessee  
(PHOTO NOT AVAILABLE)

B. L. RIGGS, M.D.  
Endocrinology and Internal Medicine  
Mayo Clinic  
Rochester, Minnesota  
(PHOTO NOT AVAILABLE)



MR. JOHN LYNCH  
Assistant Resident Secretary and  
General Manager  
The St. Paul Insurance Companies  
Little Rock Service Center



MR. JON A. ROEDER  
Auto-Casualty Superintendent  
The St. Paul Insurance Companies  
Little Rock Service Center



SPENCER O. RABB, M.D.  
Associate Professor of Medicine  
Division of Hematology and Oncology  
University of Arkansas School of Medicine

## *Distinguished Guest Speaker*



CLAIR E. COX, M.D.  
Professor and Chairman  
Department of Urology  
University of Tennessee  
College of Medicine  
Memphis, Tennessee

JOHN M. TUDOR, JR., M.D.  
Chairman, Family Medicine and  
Community Medicine  
University of Arkansas School of Medicine  
(PHOTO NOT AVAILABLE)



CHARLES W. QUIMBY, JR., M.D., LL.B.  
Assistant Professor of Anesthesiology  
University of Arkansas School of Medicine



DOLA THOMPSON, M.D.  
Chief, Anesthesia Section  
Little Rock Veterans  
Administration Hospital  
Associate Professor of Anesthesiology  
University of Arkansas School of Medicine



GUNTER K. VON NOORDEN, M.D.  
Professor of Ophthalmology  
Baylor College of Medicine  
Houston, Texas

J. D. MILLAR, M.D.  
Chief, Venereal Disease Branch  
State and Community Services Division  
Center for Disease Control  
Public Health Service  
Atlanta, Georgia  
(PHOTO NOT AVAILABLE)

WEN JUNG CHIU, M.D.  
Anesthesiology  
M. D. Anderson Hospital  
and Tumor Clinic  
Houston, Texas  
(PHOTO NOT AVAILABLE)



WARREN BOOP, M.D.  
Associate Professor of Neurosurgery  
University of Arkansas School of Medicine

## *Scientific Program*

### **Monday Morning, April 2, 1973**

**Room "C", Conference Center**

**Arlington Hotel**

(enter through exhibit area)

Guy R. Farris, M.D., First Vice President, Presiding

9:00 "Acupuncture", Wen Jung Chiu, M.D.

9:30 Panel Discussion  
Moderator: Dola Thompson, M.D.  
Panelists: Warren Boop, M.D.  
Charles W. Quimby, Jr., M.D.

10:00 Intermission — Visit Exhibits

10:30 "The Family Practice Program at the University of Arkansas — Past, Present, and Future"  
John M. Tudor, Jr., M.D.

11:00 "Emergency Room X-rays of the Head and Neck"  
Frank Agee, M.D.

11:30 "Strabismus"  
Gunter K. von Noorden, M.D.

### **Monday Afternoon, April 2, 1973**

**Room "C", Conference Center**

Fred C. Inman, Jr., M.D., Second Vice President, Presiding

1:30 "Physicians and Surgeons Professional Liability: Quicksand Controversy"  
Mr. John Lynch  
Mr. Jon A. Roeder

2:00 "Current National Venereal Disease Crisis"  
J. D. Millar, M.D.

2:30 Intermission — Visit Exhibits

3:00 "Surgical Treatment of Vertigo"  
Michael E. Glasscock, M.D.

3:30 "Diagnosis and Treatment of Primary Osteoporosis"  
B. L. Riggs, M.D.

4:00 "Modern Trends in Therapy of Urinary Tract Infections"  
Clair E. Cox, M.D.

## Tuesday Morning, April 3, 1973

### Room "C", Conference Center

Jim E. Lytle, M.D., Third Vice President, Presiding

9:00 Oncology Conference

Moderator: Bill Tranum, M.D.

"Trends in Chemotherapy of Cancer in Children"

F. Stanley Porter, M.D.

"Experience with Aspiration Biopsies"

Merlin L. Trumbull, M.D.

"Gynecological Neoplastic Lesions, Their Identification and Treatment"

Laman A. Gray, M.D.

10:00 Intermission — Visit Exhibits

10:30 "Oncology"

Discussion Panel

Moderator: Bill Tranum, M.D.

F. Stanley Porter, M.D.

Merlin Trumbull, M.D.

Laman A. Gray, M.D.

11:30 Adjourn for Memorial Service

## *Related Meetings*

### ASSOCIATION OF TUMOR CLINIC STAFF MEMBERS IN ARKANSAS

The Association of Tumor Clinic Staff Members in Arkansas will have its annual luncheon meeting and Cancer Seminar beginning at 12:00 noon on Monday, April 2nd, in the Mercury Room of the Arlington Hotel. Dr. W. Mage Honeycutt, Association chairman, will preside. Guest speaker will be Spencer Raab, M.D., Associate Professor of Medicine, Division of Hematology and Oncology, University of Arkansas Medical Center. Dr. Raab will speak on "Medical Care of Patients with Cancer".

### ARKANSAS SOCIETY OF ANESTHESIOLOGISTS

The Arkansas Society of Anesthesiologists will have a luncheon and business meeting on Monday, April 2nd, beginning at 12:30 P.M. in the Arlington Hotel. Dr. Wen Jung Chiu, Anesthesiologist with the M. D. Anderson Hospital and Tumor Institute of Houston, will speak on "Acupuncture for the Anesthesiologist."

### EAR, NOSE AND THROAT SECTION

The Ear, Nose and Throat Section of the Arkansas Medical Society will meet at 9:00 A.M. on Tuesday, April 3rd, in the Arlington Hotel. A brief business meeting will precede the noon luncheon. The scientific program will be as follows: "Pitfalls in the Diagnosis of Acoustic and Other Cerebellopontine Angle Tumors"—Michael E. Glasscock, M.D., F.A.C.S., Nashville, Tennessee; "Rhinoplasty"—Ellery C. Gay, Jr., M.D., Little Rock.

### EYE SECTION

The Eye Section, Arkansas Medical Society, will meet on Tuesday, April 3rd, in the Arlington Hotel. Dr. F. Hampton Roy, program chairman, has announced

## **ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

the following program:

9:00 A.M.	"Visual Evoked Responses"
	George Schroeder, M.D., Little Rock
9:15 A.M.	"Conradi's Syndrome"
	James Y. Massey, M.D., Little Rock
9:35 A.M.	"Strabismus I"
	Gunter K. von Noorden, M.D., Professor of Ophthalmology, Baylor College of Medicine, Houston, Texas
10:15 A.M.	Break
10:45 A.M.	"Lesch Nylan Syndrome"
	Paul Wilson, M.D., Little Rock
11:10 A.M.	"Strabismus II"
	Gunter K. von Noorden, M.D.
12:00 A.M.	Group luncheon and business meeting

### **EYE, EAR, NOSE AND THROAT SECTION LUNCHEON**

There will be a joint luncheon for all members of the EENT Section at the Arlington Hotel on Tuesday, April 3rd, beginning at 12:15 P.M.

### **ARKANSAS ACADEMY OF FAMILY PHYSICIANS**

The Arkansas Academy of Family Physicians will meet on Tuesday, April 3rd, in the Arlington Hotel. There will be a 12:00 noon luncheon, followed by a presentation by David L. Barclay, M.D., Professor and Chairman, Department of Obstetrics and Gynecology, University of Arkansas Medical Center. All physicians are invited to attend.

The Board of Directors of the Academy will hold a board meeting following Dr. Barclay's presentation.

### **INTERNAL MEDICINE**

The Arkansas Society of Internal Medicine will meet for a luncheon and business meeting at 12:00 noon on Tuesday, April 3rd, in the Arlington Hotel. Dr. James W. D. Wilson, president, will preside. There will be a short program on "PSRO Requirements as They Relate to Hospitals".

### **OBSTETRICS-GYNECOLOGY**

The Arkansas Section of the American College of Obstetricians and Gynecologists will meet on Tuesday, April 3rd, in the Arlington. A luncheon at 12:00 noon will precede a scientific discussion presented by Laman A. Gray, M.D., Clinical Professor of Obstetrics and Gynecology, University of Louisville School of Medicine, Louisville. The title of Dr. Gray's presentation will be "Gynecologist Examines the Breast". There will be a business meeting following the scientific presentation.

### **PATHOLOGY**

The Arkansas Society of Pathologists will have a luncheon and business meeting on Tuesday, April 3rd, at 12:30 P.M. in the Arlington. Guest speaker will be Dr. Merlin Trumbull, Associate Director, Department of Pathology,

## **ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

Baptist Memorial Hospital, Memphis, Tennessee. Dr. Trumbull will speak on "Staffing of Clinical Laboratories".

### **PEDIATRICS**

The Arkansas Chapter of the American Academy of Pediatrics will meet on Tuesday, April 3rd, in the Arlington Hotel. Dr. D. H. Berry, program chairman, has announced the following program:

12:00 Noon	Luncheon Meeting
1:00 P.M.	Business Meeting
2:00 P.M.	Break
2:30 P.M.	Pediatric Oncology "The National View" F. Stanley Porter, M.D., Professor of Pediatrics, Pediatric Hematology, Duke University Medical Center, Durham, North Carolina "The State View" D. H. Berry, M.D., Associate Professor, Department of Pediatrics, University of Arkansas School of Medicine "The Local View" Ronald L. Baldwin, M.D., Magnolia, Arkansas
	Panel Discussion Moderator: Betty Lowe, M.D., Texarkana, Arkansas
4:30 P.M.	Adjourn

### **RADIOLOGY**

The Arkansas Chapter of the American College of Radiology will have a luncheon and business meeting on Tuesday, April 3rd, beginning at 12:00 noon at the Arlington Hotel. Dr. Frank Agee, Professor of Radiology, University of Florida College of Medicine, Gainesville, will be the speaker for the scientific program. Dr. Agee will speak on "The Radiologic Diagnosis of Acoustic Neuromas".

### **UROLOGY**

The Urology Section, Arkansas Medical Society will have a noon luncheon followed by a business meeting and scientific program on Tuesday, April 3rd, in the Arlington Hotel. Guest speaker will be Dr. Clair Cox, Professor and Chairman, Department of Urology, University of Tennessee College of Medicine, Memphis.

### **ORTHOPAEDICS**

The Arkansas Orthopaedic Society will meet at 12:00 noon on Tuesday, April 3rd. Dr. B. L. Riggs of the Mayo Clinic, Rochester, Minnesota, will speak on "Bone Turnover—Sex Hormone—Parathyroid Hormone Interrelationships in Primary Osteoporosis". The luncheon meeting will be held at the Arkansas Rehabilitation Center. Bus transportation to the Center will be available, leaving the Arlington Hotel at 11:45 A.M.

# *Memorial Service*

**Joint Society-Auxiliary Service, Ballroom, Arlington Hotel**

**11:30 A.M., Tuesday, April 3**

Presiding: Robert Watson, M.D., President, Arkansas Medical Society

Invocation: Dr. William Howard Kryder, The First Presbyterian Church, Hot Springs

Reading of names of deceased members of the Society: Dr. Watson

Reading of names of deceased members of the Auxiliary: Mrs. W. Myers Smith, President, Woman's Auxiliary to the Arkansas Medical Society

Memorial Address: Marion H. Wilmoth, M.D., Nashville

Be of Good Comfort, from "Ruth" — F. H. Cowen

Mrs. Paul Gray, Soprano

Mr. Herman Hess, Accompanist

Benediction: Dr. Kryder

## **IN MEMORIAM**

### **SOCIETY MEMBERS**

Eldon L. Caffery, M.D., Jonesboro

W. T. Champion, M. D., Stuttgart

Calvin A. Churchill, M.D., Batesville

R. C. Dickinson, M.D., Horatio

Floyd S. Dozier, M.D., Marianna

W. Gilbert Eberle, II, M.D., Little Rock

Charles W. Hall, M.D., Greenwood

O. J. T. Johnston, M.D., Batesville

Howell E. Leming, M.D., Fayetteville

R. C. Lewis, M.D., Camden

Garland D. Murphy, Sr., M.D.,

El Dorado

David H. Pontius, Jr., M.D., West Memphis

Nicholas W. Riegler, Sr., M.D., Little Rock

Wallis A. Ross, M.D., Arkadelphia

M. H. Scott, M.D., Fort Smith

Jack M. Sheppard, M.D., El Dorado

William L. Wozencraft, M.D., Fayetteville

### **AUXILIARY MEMBERS**

Mrs. R. J. Calcote, Little Rock

Mrs. H. A. Ross, Arkadelphia

Mrs. William L. Sadler, Little Rock

Mrs. J. K. Sheppard, Sr., El Dorado

Mrs. E. H. White, Little Rock



## *Guest Speaker House Of Delegates*



**Dr. Hoffman**

Dr. C. A. Hoffman, President of the American Medical Association, will address the House of Delegates at its meeting at 1:00 P.M. on Sunday, April 1st. Dr. Hoffman practices Urology in Huntington, West Virginia.

## *House Of Delegates Meeting*

### **FIRST MEETING**

**1:00 P.M., Sunday, April 1, 1973**

**Room "C", Conference Center, Arlington Hotel**

Amail Chudy, M.D., Speaker of the House of Delegates, Presiding

1. Call to Order
2. Roll Call of Delegates
3. Report of Credentials Committee

4. Adoption of minutes of the 96th Annual Session as published in the June 1972 issue of the Journal of the Arkansas Medical Society
5. Introduction of Guests  
Mrs. Willard C. Scrivner, East St. Louis, Illinois, President-elect, Woman's Auxiliary to the American Medical Association

**ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

Mrs. Erle E. Wilkinson, Nashville, Tennessee, President, Woman's Auxiliary to the Southern Medical Association

Mrs. W. Myers Smith, North Little Rock, President, Woman's Auxiliary to the Arkansas Medical Society

Mrs. A. S. Koenig, Fort Smith, President-elect, Woman's Auxiliary to the Arkansas Medical Society

6. Address by C. A. Hoffman, M.D., Huntington, West Virginia, President, American Medical Association

7. Report from Chairman of the Council, C. C. Long, M.D.

8. Reports of Committees  
Reports published in the March Journal may be amended by Committee Chairman. All reports will be referred to the Reference Committees.

9. Old Business  
Constitutional Revisions presented for final approval:

1. Making graduates of foreign medical schools eligible for membership.
2. Discontinuing the Committee on Continuing Education

Constitutional Revisions presented for first reading:  
(In accordance with recommendations of the House at the 1972 Annual Session)

1. Designate senior councilor; Require annual councilor district meetings; Require written report of councilors
2. Assign responsibility for committee guidance to three vice presidents.
3. Provide for medical student membership.

10. New Business  
(Chapter XI, Section 2, of the Society Constitution pertaining to business of the House is quoted as follows for the information of the House:  
"All items expected to be considered at the Annual Meeting of the House of Delegates of this Society must be printed in the Journal of the Arkansas Medical Society in the month preceding the Annual Meeting. All resolutions to be submitted to the House of Delegates at the Annual Meeting must be received in the office of the Executive Vice President twenty days prior to said meeting. Any new business proposed during the first session of the House of Delegates of this

Society must have a two-thirds majority of the attending delegates voting for such introduction into this Session. Any new resolutions or other new business proposed for introduction to this House of Delegates after the first session in each Annual Meeting must have two-thirds consent of attending delegates before its introduction.")

11. Announcements of Vacancies on State Boards  
Arkansas State Medical Board (Third Congressional District)
12. Selection of Nominating Committee
13. Adjournment

**FINAL MEETING**

**10:00 A.M., Wednesday, April 4, 1973**

**Room "C", Conference Center**

1. Call to Order
2. Report of Nominating Committee
3. Elections  
Society Officers:  
President-elect  
First Vice President  
Second Vice President  
Third Vice President  
Treasurer  
Secretary  
Speaker of the House of Delegates  
Vice Speaker of the House of Delegates  
Councilors (one from each of the ten councilor districts)  
Councilors whose terms expire are:
  1. Eldon Fairley, Osceola
  2. Paul Gray, Batesville
  3. Dwight W. Gray, Marianna
  4. Raymond Irwin, Pine Bluff
  5. Kenneth R. Duzan, El Dorado
  6. Karlton H. Kemp, Texarkana
  7. James C. Bethel, Benton
  8. W. Payton Kolb, Little Rock
  9. Morriss M. Henry, Fayetteville
  10. C. C. Long, Ozark

American Medical Association Delegates:

Delegate to the American Medical Association House of Delegates (Term of Purcell Smith, M.D., expires December 31, 1973).

Alternate Delegate to the American Medical Association House of Delegates (Term of T. E. Townsend, M.D., expires December 31, 1973).

## ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973

4. Election to fill vacancies on State Boards	proposed for introduction to this House of Delegates after the first session in each annual meeting must have two-thirds consent of attending delegates before its introduction.
5. Reports of Reference Committees	
6. Supplemental Report of Council	
7. New Business	
Any new resolution or other new business	8. Adjournment

### REFERENCE COMMITTEES

Reference Committees appointed by the Speaker of the House of Delegates will hold open hearings to discuss the committee reports published in the March Journal, as well as any supplemental reports and resolutions referred to them during the first meeting of the House of Delegates on Sunday, April 1st. All members are urged to participate in the discussion at the meetings. The committees will meet at 3:30 P.M. on Sunday, April 1, in the Arlington Hotel.

Members of the committees are:

#### Reference Committee No. 1:

Karlton Kemp, M.D., Texarkana, Chairman  
T. E. Townsend, M.D., Pine Bluff  
Stanley Applegate, M.D., Springdale  
John Satterfield, M.D., Little Rock

#### Reference Committee No. 2:

James L. Smith, M.D., Little Rock, Chairman  
George Burton, M.D., El Dorado  
Wade Burnside, M.D., Fayetteville  
Paul Gray, M.D., Batesville

#### Reference Committee No. 3:

Kemal Kutait, M.D., Fort Smith, Chairman  
James Weber, M.D., Jacksonville  
T. E. Burrow, M.D., Hot Springs  
Dwight W. Gray, M.D., Marianna

### STATE BOARD VACANCIES

#### Arkansas State Medical Board

A vacancy occurs in the Third Congressional District, the counties of which are listed below. Members from these counties are urged to meet in the Arlington Hotel immediately following adjournment of the House of Delegates meeting on Sunday, April 1, to vote for nominees. Nominations should be reported to the convention registration desk.

#### Third District —

Counties in District: Baxter, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Van Buren, and Washington

#### Present Member:

Ross Fowler, M.D., Harrison, term expires December 31, 1973, eligible for re-appointment.

## *Woman's Auxiliary*

The 49th Annual Session of the Woman's Auxiliary to the Arkansas Medical Society will be held April 1, 2, and 3, 1973, in the Arlington Hotel, Hot Springs, Arkansas. Mrs. Gerald Patton and Mrs. McDonald Poe of Fort Smith are Convention Co-Chairmen.

## **REGISTRATION**

Sunday, April 1	2:00 P.M. to 4:00 P.M.
Monday, April 2	8:30 A.M. to 12:00 Noon
	3:00 P.M. to 4:00 P.M.
Tuesday, April 3	9:00 A.M. to 12:00 Noon

Reservations for luncheons will close at 10:30 A.M. on respective days. Tickets will be sold at the registration desk in the Mezzanine Lobby, Arlington Hotel. The following schedule of prices includes tax, gratuity and hospitality hour:

Monday luncheon.....\$4.00      Tuesday luncheon.....\$5.50

Sunday, April 1

2:00 P.M.	Pre-Convention Board Meeting, President's Suite For State Officers, Committee Chairmen and County Presidents
4:00 P.M.	Reception for 1972-73 and 1973-74 officers and members-at-large, President's Suite. All members are invited.

**Monday, April 2**

9:30 A.M.      Opening General Session, Venus Room, Mrs. W. Myers Smith,  
                    Presiding  
        Invocation: Mrs. Art B. Martin, Fort Smith  
        Auxiliary Pledge  
        Introduction of Guests  
        Introduction of President-elect  
                    Mrs. A. S. Koenig, Fort Smith  
        Greetings  
                    Robert Watson, M.D., Little Rock, President, Arkansas  
                    Medical Society  
                    Paul C. Schaefer, Executive Vice President, Arkansas  
                    Medical Society  
        Address of Welcome: Mrs. Robert Hill, Hot Springs,  
                    President, Garland County Auxiliary  
        Response: Mrs. C. Lynn Harris, Hope, Past President,  
                    Woman's Auxiliary to the Arkansas Medical Society  
        Roll Call and Seating of Delegates: Mrs. James C. Bethel,  
                    Benton, Recording Secretary  
        Presentation of Convention Agenda: Mrs. W. Myers Smith,  
                    North Little Rock  
        Convention announcements: Mrs. Gerald Patton and Mrs.  
                    McDonald Poe, Fort Smith, Convention Co-Chairmen

**ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973**

Minutes of the Forty-eighth Annual Session  
Announcement of Convention Committees  
Reading Committee  
Courtesy Resolutions Committee  
Credentials Committee  
Report of Board of Directors: Mrs. W. Myers Smith  
Report of Officers and Committee Chairmen  
Unfinished Business  
New Business  
Election of Nominating Committee  
Election of Delegates and Alternates to the 1973 Convention of the Woman's Auxiliary to the American Medical Association  
Presentation of the 1973-74 Budget: Mrs. Charles Wilkins, Jr., Russellville, Finance Chairman  
Address with question and answer period  
Mrs. Willard C. Scrivner, President-elect, Woman's Auxiliary to the American Medical Association  
Adjourn

12:30 P.M.      Hospitality Hour

1:00 P.M.      Luncheon, Main Dining Room, Arlington Hotel  
Honoring Mrs. Willard C. Scrivner  
Arrangements: Woman's Auxiliary to the Bowie-Miller County Medical Society, Mrs. Gene Townsend, Texarkana, president  
Invocation: Mrs. Payton Kolb, Little Rock  
Introduction of Guests  
Style Show by Crown Colony of Hot Springs

**Tuesday, April 3**

8:00 A.M.      Past Presidents' Breakfast, Montagu Room, Arlington Hotel  
Mrs. John McCollough Smith, Little Rock, Chairman

8:30 A.M.      Coffee and Doughnuts, Venus Room

9:30 A.M.      Second General Session, Venus Room, Mrs. W. Myers Smith, Presiding  
Invocation: Mrs. Henry V. Kirby, Harrison  
Roll Call and Seating of Delegates: Mrs. James C. Bethel, Recording Secretary  
Reading of Minutes of the First General Session  
Convention Announcements: Mrs. Gerald Patton and Mrs. McDonald Poe  
Reports of County Presidents  
District Vice Presidents will be moderators  
Northeast District: Mrs. Asa Crow, Paragould  
Northwest District: Mrs. T. A. Field, III, Fort Smith  
Southeast District: Mrs. George Roberson, Pine Bluff  
Southwest District: Mrs. Robert Nunnally, Gordon  
Report of Registration Committee: Mrs. Wallis A. Ross, Arkadelphia, President, Woman's Auxiliary to the Clark County Medical Society

## ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973

	Unfinished Business
	New Business
	Report of Nominating Committee: Mrs. Harold Langston, Little Rock, Chairman
	Election of Officers
	Report of Courtesy Resolutions Committee
	Adjourn
11:30 A.M.	Joint Memorial Service with the Arkansas Medical Society, Ballroom of the Arlington
12:15 P.M.	Hospitality Hour, Fountain Room, Arlington Luncheon, Fountain Room, Arlington Honoring: Mrs. Willard C. Scrivner, East St. Louis, Illinois, President-elect, Woman's Auxiliary to the American Medical Association; Mrs. Erle Wilkinson, Nashville, Tennessee, President, Woman's Auxiliary to the Southern Medical Association; and Mrs. A. S. Koenig, President-elect, Woman's Auxiliary to the Arkansas Medical Society Arrangements: Auxiliary to the Washington County Medical Society, Mrs. Tom Whiting; Springdale, President Invocation: Mrs. Warren S. Riley, El Dorado Introduction of Guests Presentation of Doctor's Day Awards: Mrs. J. W. Branch, Hope, Councilor to the Southern Medical Association Auxiliary Presentation of Membership Awards: Mrs. A. S. Koenig Presentation of AMA-ERF Awards: Mrs. Paul Cornell, Little Rock Address: Mrs. Erle Wilkinson Installation of Officers President's Message: Mrs. A. S. Koenig
2:30 P.M.	Post-Convention Board Meeting



## *Scientific Exhibits*

The scientific exhibits will be located in the mezzanine lobby area and the area of the Conference Center adjacent to the technical exhibits. All members are encouraged to visit the exhibits as they are an integral part of the scientific program.

The following exhibits will be on display:

- "American College of Surgeons Committee on Trauma"  
S. E. Landrum, M.D., F.A.C.S., Fort Smith
- "Cardiovascular Surgery at the University of Arkansas Medical Center"  
Doyne Williams, M.D., Little Rock
- "Esthetic Office Procedures for the Aging Face"  
Dowling Stough, III, M.D., Hot Springs

- "Use of Fresnell Prisms in Ocular Motility"  
T. Dale Alford, M.D.  
Alford Eye Clinic, Little Rock
- "Cardiovascular Disease"  
Carl L. Williams, M.D.  
Westark Surgical Clinic, Fort Smith
- "The Diagnosis and Treatment of Arteriosclerotic Heart Disease"  
John E. Allen, Jr., M.D.  
Little Rock Surgery Clinic, P.A., Little Rock
- "Uses of Silastic in Hand Surgery"  
Kenneth Jones, M.D.  
Little Rock Orthopedic Clinic, P.A., Little Rock
- "Colonoscopy and Polypectomy"  
T. J. Smith, M.D.  
Gastroenterology Associates, P.A., Little Rock

## ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973

"Otoplasty"

Ellery Gay, M.D.

Gay Ear, Nose and Throat Clinic, P.A., Little Rock

"Recent Advances in Neurosurgical Control of Pain"

Warren C. Boop, M.D.

Department of Neurosurgery, University of Arkansas Medical Center, Little Rock

"A Selection of Cassettes for Use in Instructing Patients and Medical Students"

Harry Hayes, M.D.

Plastic and Reconstructive Surgery, Little Rock

"MEDLINE Service at University of Arkansas Medical Center Library"

Mrs. Neil Barnhard, Chief, Reference Services

University of Arkansas Medical Center, Little Rock

(Title To Be Announced)

Mr. L. D. Kerr, Information Officer

Arkansas Rehabilitation Services, Little Rock

"Aldersgate Medical Camp—A Camping Opportunity for Children with Medical Problems"

Kelsy J. Caplinger, M.D., Little Rock

"Medical Museum"

Arkansas Medical Society

"Total Hip Replacement"

Ashley S. Ross, M.D. and Jerry L. Thomas, M.D.

Arkansas Orthopaedic, P.A., Little Rock

"How the Electron Microscope Helps the Physician to Make Difficult Clinical Diagnoses"

H. White, M.D., G. J. Lucas, M.D., W. Hall, M.D. and C. N. Sun, Ph.D.

Veterans Administration

"Family Planning"

"Handicapped Children's Center"

"Tuberculosis in Arkansas"

"Home Health Services"

Daisye S. Zimmerman, Director of Public Health Education,

Arkansas State Department of Health, Little Rock



## Technical Exhibits

The business firms who purchase exhibit space at our Annual Session contribute a great deal to the financing, as well as to the educational aspects, of the meeting. The number of visits to the technical exhibits is the only criterion by which these companies can judge the value they receive from the investment in booth rental, displays, and employee's time. You will be rewarded for the time you spend visiting the exhibits. Following are descriptions of displays to be featured.

### ABBOTT LABORATORIES

"Tranxene will be featured at the Abbott exhibit. You are also invited to review information on Fero-Gradumet and Iberet products."

### RATHER, BEYER AND HARPER

Representatives of Rather, Beyer and Harper will have brochures and all information on the Arkansas Medical Society group plans of insurance—specifically the Income Protection Plan which is now issued on a guaranteed renewal basis, the Office Overhead Expense Plan and the new Million Dollar Professional Liability Policy. Records will be available so that each doctor may review the insurance coverages which he has under the group plans of the Arkansas Medical Society.

### A. H. ROBINS COMPANY

You are cordially invited to visit the A. H. Robins exhibit and meet our representatives who will welcome the opportunity to discuss products of interest with you.

### PARKE-DAVIS AND COMPANY

Members of the medical profession are encouraged to visit the representatives of Parke-Davis and Company in booth #4. They will welcome your questions and comments regarding products of interest.

### SANDOZ PHARMACEUTICALS

Sandoz Pharmaceuticals cordially invites you to visit our display at booth #5, where we are featuring MELLARIL, HYDERGINE and FIOGESIC.

Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

### FIRST ARKANSAS LEASING CORPORATION

First Arkansas Leasing Corporation will display a group of pictures representing the various types of equipment that can be leased by the medical profession; brochures explaining our leasing program will be available; the "Advantages of Leasing" will be presented; a FALCO representative will be available for lease quotations and for questions concerning leasing in general as directed and governed by the Internal Revenue Service.

### SCHERING CORPORATION

"SCHERING LABORATORIES invites you to visit booth #7 where their representatives will be available to discuss with you any questions you may have concerning DRIXORAL®, ETRAFON®, AND VALISONE®, or any other Schering products."

### ORTHO PHARMACEUTICAL CORPORATION

Welcome to Booth #8 where Ortho Pharmaceuticals is proud to present the most complete line of medically accepted products for the control of conception. Also on display will be our well-known products for the treatment of various forms of vaginitis. Your questions will be welcome.

### ARKANSAS BLUE CROSS-BLUE SHIELD

"Our booth is for your convenience and we welcome your visit. Blue Cross-Blue Shield's representatives are always ready to help solve any case problem or answer

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your questions. The medical profession has been largely responsible for our growth in membership which now totals over 520,000—an achievement of which we should all be proud."

### G. D. SEARLE AND COMPANY

You are cordially invited to visit the SEARLE booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be information on OVULEN®, DEMULLEN®, ENOVID®, ALDACTAZIDE®, FLAGYL®, LOMOTIL®, PRO-BANTHINE®, METAMUCIL® and other drugs of interest.

### MEAD JOHNSON LABORATORIES

The Mead Johnson Laboratories' exhibit has been arranged to give you the optimum in quick service and product information. To make your visit productive, specially trained representatives will be on duty to tell you about *K-Lyte*, *K-Lyte CL*, *Vasodilan*, *Feminins*, *Oracon* and *Halotex*.

### AYERST LABORATORIES

"AYERST LABORATORIES is pleased to offer you or a member of your family—with your permission—a complimentary Cholesterol/Triglyceride determination. For an accurate determination, blood should be drawn after a 12-14 hour fast. We would like to remind you not to partake of food or drink after dinner the evening before the morning that you plan to have your personal Cholesterol/Triglyceride determination blood sample taken."

### WILLIAM T. STOVER COMPANY, INC.

The William T. Stover Company, Inc., of Little Rock, will have a booth staffed with informed and qualified representatives—eager to welcome you and assist in any manner possible—as well as to show you the up-to-date developments in the medical and surgical industry.

### CIBA PHARMACEUTICAL COMPANY

Ciba Pharmaceutical Company's booth will feature: Hypertension—Treatment (Cassette film presentations); CHEC (Community Hypertension Evaluation Clinic); Screening for Hypertension, information regarding this program sponsored by CIBA.

### LAKESIDE LABORATORIES, INC.

A cordial invitation is extended to all members and guests attending to visit the Lakeside Laboratories booth. We will have trained representatives in attendance to answer questions about our products.

### ASTRA PHARMACEUTICAL PRODUCTS, INC.

Information and descriptive literature pertaining to Xylocaine® (lidocaine) and Citanest® (prilocaine) local and topical anesthetics; Jectofet® (iron sorbitex) intramuscular iron and Xylocaine HCl 2% for intravenous use in the treatment of life-threatening cardiac arrhythmias will be available at the Astra booth.

### PROFESSIONAL LEASING COMPANY

You are cordially invited to visit the Professional Leasing Company exhibit and meet our representatives who will welcome the opportunity to discuss the various types of lease-arrangements for the medical profession.

### WILLIAM P. POYTHRESS AND COMPANY, INC.

The Poythress Company has the priceless heritage of one-hundred seventeen years of comradeship with the medical profession. May it last forever.

### CAMP TAHKODAH

A summer camping experience is one of the nicest things that can happen to a boy. To master skills of horsemanship, archery, and canoeing—to experience the peace and serenity of the out-of-doors—this is part of a boy's heritage too often missed today. Doctors seem to be keenly aware of this; many of our campers are doctor's sons or boys to whom doctors have recommended Camp Talikodah. Owned by Harding College, Camp Tahkodah is in its thirty-first year.

### E. R. SQUIBB AND SONS, INC.

E. R. SQUIBB AND SONS, INC., has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvements in products already marketed.

At our booth, we will be pleased to present up-to-date information on these products and services.

### THE ST. PAUL INSURANCE COMPANIES

St. Paul's purpose in providing an exhibit is to continue the open communications between doctor and company concerning Medical Malpractice Insurance. We will staff our booth by company personnel who will be happy to answer questions that doctors may have on the subject. We will provide information concerning Medical Malpractice Insurance, related coverages, and will provide a list of agents throughout Arkansas who represent our company so that the doctors may place insurance in the local community where they practice. The availability of "Home-town" coverage is one of the more important characteristics of our Malpractice Program.

### ARKANSAS REGIONAL MEDICAL PROGRAM

Arkansas Regional Medical Program's exhibit is a colorful characterization of ARMP's statewide involvement in the delivery of quality health care. In addition to the lighted pictorial display, created by a Little Rock artist, captions lend emphasis beneath each panel. C. W. Silverblatt, M.D., ARMP coordinator, Ray Reynolds, ARMP field representative, and Mrs. Kathleen C. Dozier, ARMP director of information, will be present to provide further information and answer questions.

### MARION LABORATORIES, INC.

Come see GAVISCON®, a unique new specific for treatment of heartburn associated with hiatal hernia, gastroesophageal reflux and esophagitis. GAVISCON provides pinpoint neutralization of acid in the cardia and fundus . . . a highly viscous layer of gel like antacid foam floats on stomach contents to inhibit gastroesophageal reflux.

### RUCKER PHARMACAL COMPANY, INC.

The representatives at the Rucker booth will be happy to discuss products of interest. A cordial invitation is extended to all members of the Society to visit the booth.

### CUMMINGS X-RAY COMPANY

Our display will feature the new processor Pakorol I4 X. Exceptional new features make the I4 X a new dimension

## ARKANSAS MEDICAL SOCIETY MEETING, APRIL 1-4, 1973

in X-Ray film processing and is ideal for the Doctor's Clinic. It is of low cost, compact, fast, dry-to-dry processing in 2 minutes.

We will also show the new Model SP-901 Showa Portable, Mobile Wall or Ceiling Mounted X-Ray Unit. It is extremely compact, light weight. The Showa Portable X-Ray Unit is designed to meet every need for quality Radiography of any part wherever standard A.C. outlet is available.

### BRISTOL LABORATORIES

You are cordially invited to visit our exhibit reflecting Bristol's leadership and enduring commitment to the manufacture of lifesaving antibiotics.

### THE UPJOHN COMPANY

Our exhibit will feature information on Solu Medrol, Orinase, Tolinase, Cleocin, Trobicin and the Gravlee Jet Washer.

### BANREAL COMPANY

Our display will describe the advantages, options, and types of equipment that leasing affords. Literature and information available for the Society membership. Someone will be available at all exhibit hours to answer questions about our leasing program.

### STUART PHARMACEUTICALS

"A cordial invitation is extended to all members and guests attending to visit the Stuart Pharmaceuticals booth. Trained representatives will be in attendance to answer your questions on our products: MYLANTA®, CHEWABLE SORBITRATE®, SORBITRATE® Sublingual and Oral, KINESED®, STUARTNATAL™ I+I and others.

### MOUNTAIN VALLEY SPRING COMPANY

MOUNTAIN VALLEY WATER ranks with leading natural waters of the world. Low-salt, hard, pleasant to taste, it is the only spring water available across the nation. The spring, at Hot Springs, has been used constantly for 102 years.

\* \* \*

The Arkansas Medical Society expresses appreciation to Eli Lilly and Company for a Lilly State Medical Convention Grant.

\* \* \*

The A. H. Robins Company has contributed funds for use in furthering the educational program of the Arkansas Medical Society. The Society appreciates this support of its scientific activities by Robins.



## *House Of Delegates Business Affairs*

Reports printed below are brought to the attention of individual members and the county medical societies. The items reported here represent those received in time for publication in advance of the meeting. All reports will be referred to reference committees. Members are urged to attend the open hearings of the reference committees to express their views. Reference Committee hearings are scheduled for 3:30 P.M. on Sunday, April 1.

### ANNUAL COMMITTEE REPORTS

#### Sub-Committee on National Legislation

**George W. Jackson, M.D., Chairman**

The Sub-Committee on National Legislation has not met as a body during the last year but each member has attempted to stay informed on national legislation which was pending as it related to medical services. We have been particularly interested in those bills relating directly to national health insurance.

With the adjournment of the last Congress, all bills that were introduced are no longer under consideration and new bills must be introduced during the present session. We will watch for and carefully study any bills introduced and will

call such meetings of the committee as are necessary to consider any action that the Society should take or, if considered necessary, we will set up conference calls to discuss any important issues.

The committee will appreciate hearing from any of the membership of the Society relating to health legislation and any suggestions they may have for action by our committee.

#### Committee on Public Health (Rural Health)

**Ben N. Saltzman, M.D., Chairman**

The Chairman this year has been involved in several activities relating to the Public Health Committee. He represented the Arkansas Medical Society at a meeting of the Council on Voluntary Health Agencies of the American Medical Association in Atlanta, Georgia; the Arkansas Public Health Association in Hot Springs, Arkansas; the Agricultural Extension Service in Little Rock; the Federal Agencies Review, Texas Medical Association, Austin, Texas; and the Arkansas 4-H Congress in Conway, Arkansas.

Our committee played a large part in representing the Medical Society in eight district 4-H O-Rama's. Several members of the Council par-

ticipated in the various district judging activities for the purpose of selecting the outstanding 4-H participants in health activities. Those participating were: Dr. John P. Wood, president-elect; Dr. J. B. Jameson, councilor; Dr. John B. Kirkley, councilor; Dr. J. P. Bell, councilor; Dr. Paul Gray, councilor; Dr. Morris M. Henry, councilor; Dr. Raymond Irwin, councilor; and Dr. Charles F. Wilkins, Jr., vice speaker.

The committee met in Little Rock on December 3rd and made plans to attend the National Rural Health Conference in Dallas, Texas, in April. The Chairman has been asked to make a presentation and participate in a panel discussion at the conference. Plans are being made for increased participation of the committee members in all activities.

#### **Sub-Committee on Tuberculosis**

**John P. Wood, M.D., Chairman**

The Committee on Tuberculosis met at 8:30 A.M. at the December 3rd Mid-winter Meeting of the Arkansas Medical Society. Present were Dr. W. A. Hudson, Dr. J. Pat Bell, Dr. Garland "Doty" Murphy, III, and the Chairman, Dr. John P. Wood.

Dr. Murphy, Head of the Department of Communicable Diseases, State Health Department, spoke on the Health Department's proposed plans for the care of the tubercular ill in Arkansas. Dr. Murphy discussed the phasing out of the Arkansas Tuberculosis Sanatorium at Booneville and the proposed utilization of those facilities. He related that a portion of the facilities, not to include the multi-storied buildings, such as the Nyberg Building, would be utilized and taken over for the care of mentally retarded children. There are no plans for utilizing any of the present facilities for out-patient tuberculosis care or clinics. This phasing out and changeover is to be accomplished by June 30, 1973.

Dr. Murphy also revealed the formation of chest clinics in fifty counties of the State and that the lag had been in those counties of Western Arkansas presently served by the Arkansas Tuberculosis Sanatorium and that efforts would be made to form chest clinics in Western Arkansas in the near future.

Dr. Murphy also spoke on the proposed budget of the State Health Department—that increased funds necessitated by closure of the Sanatorium had been lowered by the Governor. He also

spoke on the need for salary adjustments within the Health Department for physician sanitarians which are badly needed, etc. At the time, the salaries are not competitive and hiring is not successful.

Dr. Murphy also listed the various hospitals which had expressed willingness to hospitalize and treat the tubercular under the State Health Department program.

Dr. Murphy also spoke on the great increase in venereal disease in Arkansas and the shortage of funds available. He related that the Governor also reduced the requested budget funds for the problem.

Dr. Murphy was reminded that the Arkansas Medical Society was in sympathy with the budget insufficiencies of the State Health Department and would strive to assist the State Health Department to more effectively serve the State.

The committee urges Society participation and cooperation with the State Health Department in referring the tubercular ill to the various chest clinics. Also, it is hoped that physicians in Western Arkansas will willingly participate in staffing the needed clinics in their areas when called upon by the Department of Communicable Diseases of the State Health Department.

#### **Committee on Aging**

**Joseph A. Norton, M.D., Chairman**

The Committee on Aging of the Arkansas Medical Society, for the year's period beginning April 1972, had no matters brought before it for consideration and held no meetings. There is, then, no report of activity.

#### **Sub-Committee on Industrial Health**

**Howard Schwander, M.D., Chairman**

The Sub-Committee on Industrial Health met at the Sheraton Inn on December 3, 1972, at 10:00 A.M. With the exception of Dr. Roy I. Millard and Dr. Leighton Millard, all members were present. There were also several visitors who were welcome and who enhanced the discussion.

The discussion centered around what the Committee should be involved in and then having decided that, what course or courses should be taken.

It was felt by the participating physicians that the problems encountered in this area were primarily related to: (1) pre-employment physical

examinations; (2) the understanding of and working with the Workmen's Compensation Commission; (3) the relationship of patients who could not pass pre-employment physical examinations and the possibility of their being helped by the Rehabilitation Service.

The main problems of pre-employment physicals are centered around hernias, back problems (either overt or detected by pre-employment X-ray studies), and hearing problems. It was felt that the guidelines for these above mentioned things were specific in dealing with some industrial companies and rather vague in others. The possibility of basic broad guidelines for these criteria was discussed but no specific solution arrived at since, apparently, most industrial companies set their own specific requirements.

In relation to the WCC, there was apparently a feeling that the members of the Committee, and perhaps even all of the doctors practicing in the State of Arkansas, should have a copy of the WCC Act and that, if possible, a meeting of the Industrial Health Committee and the WCC Committee would be beneficial to discuss mutual problems.

The Chairman committed himself that, as soon as possible, he would try to see if a meeting could be arranged with the WCC and also that copies of the Compensation Act be furnished to the Committee. The feasibility of furnishing copies of the Act to all members of the State Society will also be investigated.

#### **Committee on Mental Health**

##### **W. Payton Kolb, M.D., Chairman**

A study has been made of the directorship of the community mental health centers of the State. Regulations from the National Institute of Mental Health provide that the director does not have to be a mental health professional. We recognize this was brought about principally because of the manpower shortage. This does not relieve the need for medical leadership in these centers. Mental health is a primary concern of medicine.

This committee recommends that the Arkansas Medical Society urge its members, residing and working in areas close to mental health centers, to become active in the leadership of the centers. We recommend that the physicians acquaint themselves with the centers and their workings and that the county medical societies work

toward having physicians as members of mental health center boards and as consultants to the boards. We would like to point out that the absence of a psychiatrist in a particular area does not mean adequate medical consultation and supervision can not be given and we strongly urge that the general practitioners and specialists in all the fields take an active interest in the workings of the community mental health centers.

This committee continues to urge that the Arkansas Medical Society strongly support the stand of the Council on Mental Health of the American Medical Association and the American Psychiatric Association in regard to health insurance. The Reed Report from the American Psychiatric Association definitely proves that mental health and illness is insurable by present day standards. The AMA and the APA agree that every effort should be made for private health insurance to be extended to full coverage for psychiatric illness and that any national health insurance program treat psychiatric illness in the same way that any other illness is treated.

The committee urges the Arkansas Medical Society to support the efforts being made to convince health insurance carriers to not deny coverage for cases of drug overdosage and alcoholism. It is recognized these conditions are symptoms of deep-seated psychopathology and this should be covered as any other illness.

It has become evident that grants for the National Institute of Mental Health for research, undergraduate training and resident training in psychiatry are to be markedly curtailed. (Since the committee has met, news releases from Washington indicate this is going to be more than originally thought.) Due to the better acceptance of help for psychiatric illness, the shortage of manpower, and other reasons which are creating deficiencies in care for the psychiatric patient, it is essential that the flow of trained personnel into the field not only be maintained but increased. There is a possibility the training centers, such as the University of Arkansas Medical Center and the State Hospital, may request State funding to continue these programs. If this is feasible and introduced, it is urged that the Arkansas Medical Society support these institutions in their efforts.

This committee urges all physicians to be acutely aware of the responsibility of confidentiality in all areas as well as psychiatric illness.

Any problems that arise in this area should be reported to the State Society office and then to this committee for further evaluation and study.

The committee took note of the work being done to establish peer review as required under HR 1. Special note is taken of peer review in the field of psychiatry. The American Psychiatric Association has a task force working on this. No action is required at this time but this work will be followed closely.

These were the most important items of business during this year and it is hoped that next year's committee will follow up on this, as well as look into any new situations that arise.

#### **Sub-Committee on Traffic Safety**

**Carl L. Williams, M.D., Chairman**

The Sub-Committee on Traffic Safety met on two occasions in 1972. The first meeting was held in conjunction with the Emergency Health Care Conference in Little Rock at the Holiday Inn in September of 1972. The second meeting was in conjunction with the Winter Meeting of the Arkansas Medical Society in December of 1972.

The committee forwarded to the Legislative committee recommendations for emergency medical technician's training and certification. The committee also resubmitted the proposal on re-examination of drivers, particularly as related to visual acuity.

The committee and its members remain involved in the advisory capacity to the Arkansas Health Systems Foundation and its Emergency Health Systems grants.

#### **Committee on Medical Education**

**C. Lewis Hyatt, M.D., Chairman**

A combined meeting of the Committee on Medical Education and the Medical School Committee was held at the Sheraton Hotel in Little Rock on December 3, 1972, just prior to the Council meeting of that date.

Members of the Medical Education Committee present were Drs. Winston K. Shorey, Lee Parker, Marlin Hoge, Robert Dickins, and Lewis Hyatt. Dr. Joe B. Scruggs was a guest. Members of the Medical School Committee present were Drs. Ross Fowler, James Dennis, and Kemal Kutait.

The hour was again spent in discussion, ventilation and suggestion.

This year there has been a tremendous amount of expenditure of time, effort, manpower, and money on health planning. It is hoped that some practical and concrete recommendations come forth, and that implementation of these can be started soon. The general public, patients, physicians in rural areas, and Legislators have become acutely aware of and interested in medical education and the provision of quality medical practice in all areas of Arkansas, especially the rural areas and small towns.

Drs. Dennis and Shorey outlined plans for increase in enrollment of, and production of, more family physicians by our Medical Center. Of special interest to most of the Committee members were plans for developing residencies and preceptorships in the other medical centers over the State in order to acquaint students with actual environment of medical practice in smaller towns.

It appears that the Governor and the Legislature are in a mood to appropriate vast sums of money to the Medical Center for the purposes mentioned above. I facetiously remarked, as I sometimes do, that I have anxiously awaited results for the past several years, and that "I'm from Missouri."

This Committee report has been delayed until about the latest moment because the cauldron is still boiling about medical education in the various committees of the General Assembly, and some things may not have been considered. But this will be known before this report is published.

#### **Committee on Continuing Education**

**Lee Parker, Jr., M.D., Chairman**

A committee meeting was called by the chairman to meet jointly with the Medical Education Committee during the winter session, December 3, 1972; however, most committee members indicated that they would not attend and only the chairman did attend. The report of the Medical Education Committee is submitted elsewhere.

No other committee activities occurred this year.

#### **Sub-Committee on Liaison with the Auxiliary**

**Amail Chudy, M.D., Chairman**

The most fruitful meeting with the Auxiliary to the Arkansas Medical Society was held at the winter meeting in Little Rock in December.

The wonderful ladies of the Auxiliary stated their extreme willingness and desire to act in any capacity that may facilitate the action of the Arkansas Medical Society.

They firmly stated that they were more than willing to devote the energy of their entire organization to support any project that we may call upon them for.

They are requesting that a lady be appointed to the Legislative Committee, if at all possible, to help work with this committee and bring the feelings of the Auxiliary to the Legislative Committee.

They have expressed the desire to facilitate a Health Manpower Survey and are awaiting action from the Society regarding any action in this field.

The ladies of the Auxiliary were requesting support from the Arkansas Medical Society to help underwrite a placard program on the mouth-to-mouth resuscitation that will be sold to public places throughout the State of Arkansas.

May I extend to the wonderful members of my committee and the members of the committee from the Auxiliary my sincere appreciation for helping to make this a wonderful year in this committee.

**Sub-Committee on State Health and Medical Resources for Civil Defense**

**Ralph R. Wooley, M.D., Chairman**

It is the opinion of the Sub-Committee that the present approach of Civil Defense and Civil Defense officials, along with other State agency representatives, provides an excellent training and assistance program for local communities to develop disaster preparedness plans. In view of this program, the committee sincerely recommends that county medical societies or medical councils support and participate in the community Emergency Health Planning Program.

A new concept and priority was established in the area of emergency planning for disaster to aid local communities in preparedness programs. Emergency Health Service planners assisted and coordinated with the State Office of Civil Defense and other State agencies in development of health and medical services responsibilities.

The Local Government On-Site Operational Readiness Assistance Program, designed to help local governments, counties and cities improve capabilities in conducting coordinated operations

in emergencies, included natural disasters, other peacetime emergencies and nuclear war. The program involved direct on-site Federal and State efforts and consisted of a number of specific steps, such as assessment of existing capabilities, surveillance of local needs, and development of action plans to meet identified requirements.

To date, 21 counties have participated in development of Emergency Health Service plans. Other counties scheduled for the new On-Site Assistance Program are Sharp, Ashley, Baxter, Crittenden, Washington, Jackson, Jefferson, Miller, Sebastian and the City of North Little Rock. Recently, Federal and State interviewers have been visiting the communities, interviewing the people involved in agencies that would participate in the Civil Defense Program to find out the needs of the community and help develop a program suitable to that community. A representative from the Division of Emergency Health Services, State Department of Health, has continued to work with Civil Defense officials and this phase of the program is an area where the local county medical societies or councils should, and are encouraged to, provide their knowledge, support and assistance in developing an appropriate Emergency Medical Annex for their communities.

**Advisory Committee to the Medical Assistants Society**

**G. Grimsley Graham, M.D., Chairman**

In September, the Chairman met with Paul Rainwater from the State Medical Society office to discuss and outline ways the committee could best serve AAMA in an advisory capacity. In November, we supported and advised the Society in its first statewide educational seminar held at the Sheraton Motor Inn in Little Rock. This two-day seminar was highly successful and will be an annual affair.

In January, a conference call was held with the following committee members: Dr. T. E. Townsend, Pine Bluff; Dr. Hunter Sims, Jr., Blytheville; Dr. J. L. Dedman, Camden; and Dr. W. C. Holmes, Fort Smith. Out of this conference came our recommendation that a mailing be sent out to all physicians in the State informing them of the AAMA Certification Examination to be given in June of this year. This mailing was accomplished by the State Medical Society office and we have had a good response from it.

**Committee on Insurance****Harry Hayes, Jr., M.D., Chairman**

The Committee continues to deal with personal matters that deal with individual physicians, insurance companies and claims for medical services. During this year, the main interest focused on the policies of the Aetna Life and Casualty Insurance Company in declining payment for services and, also, in the explanations given to some clients when Aetna paid only a portion of the medical claim. It is of interest that the State Aetna Office has expressed some interest in utilizing the services of the Medical Society P.S.R.O. Committee. Apparently, the final decision on that may be made this year.

The outstanding work by the Medical Society attorney, Mr. Eugene Warren, in standing off the application for an increase in rates on professional liability insurance has been publicized among the membership. The Insurance Commissioner has again expressed some interest in setting up an arbitration panel for medical malpractice cases but, at this moment, no definite time or date has been set. This committee will continue to take a very active interest in this regard.

The Committee continues to receive information regarding individual and group insurance plans affecting the membership of the Society and the Committee will continue to review these plans.

This Committee has been instrumental in getting a speaker on the malpractice situation sometime during the Annual Session.

This Committee enjoyed a very good attendance at each of the several meetings throughout the year.

**Committee on Liaison with the Nursing Profession****C. Lewis Hyatt, M.D., Chairman**

Three meetings were held with members of the Medical Society Committee on Liaison with the Nursing Profession and its counterpart, the Nursing Profession Liaison Committee. The meetings were held in Little Rock at the headquarters of the State Nurses' Association at Monticello in the office of the Medical Committee Chairman, and in Jonesboro at the Ramada Inn.

The most important meeting was the joint meeting at Jonesboro just before the opening

session of the 60th Annual Convention of the Arkansas State Nurses' Association. This was one of several so-called annual "rap" sessions designed to improve communications between M.D.'s and R.N.'s by wide open discussion with questions and answers of any and all provocative issues. It was well attended by physicians and nurses, and was apparently quite successful, judging by the steam generated.

Two of the main topics of interest to the nurses particularly were: (1) further study, action, and organization of work toward development of new "Nurse Practitioners", as opposed to "Physician's Assistants"—which in reality they are now; and (2) discussion of forming a Joint Practice Committee to replace the present two liaison committees.

The National Joint Practice Commission held a meeting at Itasca, Illinois, (near Chicago) November 9-10, 1972. None of the committee members was able to attend. Dr. Daniel Anderson, Resident in Medicine at the Medical Center, was selected to attend, observe, and report on this meeting for the Arkansas Medical Society. He gave a brief summary of this report at the December 3rd Council meeting at the Sheraton Hotel in Little Rock.

All in all, this has been a year of improved communication and discussion between our two professions, and I think that something has been accomplished. The nurses are interested and enthusiastic in their work in this field.

**Committee on Medicine and Religion****C. R. Ellis, M.D., Chairman**

Your Committee on Medicine and Religion of the Arkansas Medical Society is composed of Alvin W. Strauss, M.D., Carl E. Wenger, M.D., Kenneth A. Siler, M.D., Fred O. Henker, M.D., Kenneth Lilly, M.D., and C. R. Ellis, M.D., Chairman. Dr. Don Corley, Arkansas Baptist Medical Center, has been invited officially by the Committee to attend all meetings of the Committee as a Consultant representing the clergy.

Your Committee met on September 21, 1972, at the Arkansas Baptist Medical Center in Little Rock, instead of a previously planned meeting for September 24, 1972, in Pine Bluff. This meeting also included chaplains of the hospitals in the Little Rock area who were on the Planning Committee for the symposium held October 28, 1972, in Little Rock. This meeting was for the

discussion and final plans for the symposium of October 28, 1972, at the University of Arkansas Medical Center.

The meeting at the University of Arkansas Medical Center on October 28, 1972, was considered a success with forty physicians and sixty clergy present for the meeting. Our President, Dr. Robert Watson, was present to open the meeting which continued with brief discussions by Dr. Milford O. Rouse, Past President of the American Medical Association, from Dallas, Texas, and Dr. Richard E. Halverson, an outstanding clergyman, from Washington, D. C. Following these two discussions, the group of physicians and clergymen were divided into four groups for open free discussion, primarily to encourage discussion. However, the following subjects were presented:

**PROBLEMS BEGINNING LIFE—Illegitimacy, Unwanted Pregnancy, Abortion.**

**PROBLEMS ENDING LIFE—The Dying Patient, When to Allow Life to Stop, The Family of the Dying Patient.**

In the afternoon of this symposium, reports were made from each of these smaller groups and the subjects opened for discussion by the entire group in the auditorium of the University of Arkansas Medical Center. The program ended with two brief discussions again, one by Dr. Milford Rouse and one by Dr. Richard Halverson.

Your Committee met again on December 3, 1972, to discuss the following:

1. Review and evaluation of the meeting of October 28, 1972.
2. Plans for the Arkansas Medical Society meeting.
3. Another meeting for the entire State next year.
4. Local meetings in counties or cities.

Dr. Fred Henker reported that the total attendance at the symposium was 100, including forty physicians and sixty clergymen. A questionnaire, which had been sent out to those people attending this meeting, had revealed that many of them expressed a desire for another meeting within twelve to eighteen months. The Committee voted to plan another meeting sometime between the middle and latter part of 1974.

This Medicine and Religion Symposium was underwritten by the Arkansas Baptist Medical Center; American Academy of Family Physicians;

Merck, Sharp & Dohme; and the Arkansas Medical Society. The total amount of cash spent was \$654.37; however, the total cost of the meeting (estimating the donations of space, movie films, brochures, and other things) was \$965.00. The total cost to the Arkansas Medical Society was \$250.00 in cash and one mailing to the membership.

The Committee definitely considers this symposium to be of value in encouraging discussions between members of the clergy and physicians which will improve the overall care and treatment of our patients. The American Academy of Family Physicians has approved this meeting for six hours of prescribed study.

This Committee made a request to the chairman of the Program Committee of the Arkansas Medical Society for a speaker for the meeting in April 1973, but did not receive notification of approval of a speaker. If a place becomes available on the program, the Committee has two speakers in mind who might be able to come on this late notice.

In addition to the plans for another meeting to involve the entire State sometime in 1974, the Committee discussed local meetings in counties and cities over the State. One meeting had already been held in Fort Smith since the October 28, 1972, discussion, and another was planned for Hot Spring County the first part of 1974. Your Committee hopes that the physicians and the clergy in each county or major city in the State will develop still better understanding of each other's problems in caring for their patients and, thereby, improve the care of the patients.

Your chairman was invited to a Medicine and Religion luncheon in Cincinnati during the American Medical Association meeting but was unable to attend. He was also invited to a regional meeting concerning medicine and religion in Chicago on February 3, 1974, but was unable to attend.

The general membership of our State Society may not know that the Committee on Medicine and Religion of the American Medical Association has been discontinued in order to cut expense. Mr. Arne E. Larson has been left as head of the Department of Medicine and Religion, but Mr. William F. Hoffman, Jr., has been transferred to another department of the American Medical Association. Physicians over the country

have written in to the American Medical Association Department of Medicine and Religion objecting to this discontinuance of the Committee, including Dr. Milford O. Rouse, a Past President of the American Medical Association, from Dallas, Texas. Your State Committee regrets this action by the American Medical Association because we think this is a very vital part of the practice of medicine. It is also possibly one of the best public relations efforts the American Medical Association and the Arkansas Medical Society have ever engaged in.

Your Committee would like to urge two things in particular:

1. Arrange meetings in your own cities and counties between physicians and members of the clergy.
2. Watch your mail carefully and your local news for information about state-wide meetings sometime between June 1, 1974 and December 31, 1974.

I take this opportunity to express my sincere appreciation to members of the State Society Committee on Medicine and Religion and to those clergymen who assisted us so greatly in putting on the symposium on October 28, 1972, in Little Rock, Arkansas.

#### **Committee on Constitutional Revision**

**Lee B. Parker, Jr., M.D., Chairman**

Only two members of this committee attended the Winter Meeting, December 3, 1972, and it was felt that good discussion was not possible with regard to proposed changes.

A letter outlining the proposed changes and the discussions which were held about the various proposals was sent to each committee member on December 8, 1972. Only one member bothered to reply.

The following proposals are submitted on the basis of these limited discussions.

Basically our committee was directed by actions in the April 1972 Annual Session to submit proposals to accomplish the following four items:

1. Requirement that councilor districts hold meetings not less than once annually;
2. Requirement that councilors submit an annual report to the Council;
3. To allow Vice Presidents to be assigned by the President of the Society as ex-officio members of various committees;

4. To amend the Constitution to provide for student membership.

Our committee, therefore, submits the following proposals to effect these changes:

- I. Delete Section 2 of Chapter VII (page 10) and substitute the following paragraphs:
  1. Each councilor shall be organizer, peace-maker and censor for his district. The two councilors in each district shall be designated 'senior' or 'junior' on the basis of length of tenure.
  2. A meeting of the members in each councilor district shall be called by the councilor at least once each year within two months of the Annual Session for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for informing, improving, and increasing the knowledge and zeal of the component societies and their members.
  3. The councilors shall jointly prepare and submit to the Council prior to the Annual Session a written report of their work and of the condition of the profession within their district.
  4. The necessary traveling expenses incurred by each councilor in the line of the duties herein imposed may be allowed on submission of a properly itemized statement."

#### **Comments for reference committee and members:**

It was rather strongly felt by the committee that councilor district meetings would achieve greatest effectiveness if held just before or just after an Annual Session. This would allow either planning and discussion of impending activities if held prior to the session or dissemination of information of the just completed session if held after the session. The arbitrary designation of within two months of an Annual Session allows each district a choice of any date over a total period of four months—either two before or two after the Annual Session. We do not feel that this is an unreasonable requirement.

By allowing a joint report to be submitted, we will cause only one report per councilor district to be necessary but both councilors will be involved to assure accuracy and completeness.

**II. Under Section 3, Chapter VI, add a second paragraph:**

"The vice-presidents may be assigned by the President of the Society as ex-officio members of certain committees of the Society. The vice-presidents' responsibilities will be to stimulate, to guide, to maintain liaison, and to otherwise assist the assigned committees and their respective chairmen in the performance of their activities. In no instance will the Vice-President usurp or supplant the committee chairman in his responsibilities. The Vice-President shall not have a vote in the affairs of the committees to which he is assigned under provisions of this section."

**III. Amend Article III, Component Societies, to read:**

"Component societies shall consist of those county medical societies which hold charters from this Society; provided, however, that there may be a chartered society known as the 'Student, Intern, and Resident Society' as provided in the By-Laws."

**IV. Amend Article IV, Section 2: Active Membership, change the last sentence in this paragraph to read:**

"The eligibility requirements set forth in the preceding sentences are not to apply, however, to members in good standing in any component society at the time of the adoption of this Section (Adopted, House of Delegates, 1937 Annual Session) nor to the members of the specially chartered 'Student, Intern, and Resident Society'."

**V. Amend Article V, House of Delegates, by adding at the end of the paragraph:**

"and (4) one delegate from the 'Student, Intern, and Resident Society'".

**VI. Delete Section 6, Chapter 1 of By-Laws (Affiliate membership for Interns and Residents)**

New Section 6, Chapter 1 of By-Laws:

"Special membership for Students, Interns and Residents

1. An annual special membership shall be granted to bona-fide students of medicine at the University of Arkansas School of Medicine and to Interns and Residents within the State of Arkansas who are

physicians, provided that they are fully or partially excused from the payment of county society dues, not to exceed ten percent of the dues charged active members of the Society, and provided that the request for exemption is transmitted through a component society of the Arkansas Medical Society. The requirement for active membership prior to exemption shall be waived for such special members.

2. The special members resulting from this section will comprise a single component group of the State Society similar to a county society, shall have privileges of speech, may serve on committees, will receive the Journal of the Arkansas Medical Society and shall be entitled to one voting representative in the House of Delegates."

Comments for reference committee and members:

We have attempted in this section to allow the establishment of a Student, Intern, and Resident component society. Dues may or may not be levied. To get into this special component society, each member must apply to a county society, thus allowing for some screening processes by the county society (which some members have insisted should be provided for). It does allow them to serve as called upon by the President, the Council, etc., and does allow them the one vote in the House as recommended by the 1972 House of Delegates.

**Arkansas State Advisory Committee to the  
Selective Service System**  
**L. A. Whittaker, M.D., Chairman**

The committee has considered one case since April 10, 1972. This case involved a physician who had been commissioned as a First Lieutenant under the Berry Plan. The committee rejected his request for military deferment.

No other requests have been made for committee action.

**Student AMA Liaison Committee**  
**Alfred Kahn, Jr., M.D., Chairman**

The liaison meeting between the Arkansas Medical Society and the Student American Medical Association was held at 10:00 A.M. on December 3, 1972, in the Sheraton Hotel.

The first point of discussion was an explanation by the representatives of the Arkansas

Medical Society that there was a need for a broad interface of contact between the Student American Medical Association and the Arkansas Medical Society. It was pointed out that differences in education, experience, and age might lead to some defects in communication and this meeting was set up to avoid this very possibility.

Mr. Robert Webb then discussed some of the interesting facets of SAMA. In the first place, he mentioned that SAMA was now principally composed of pre-clinical students of the University of Arkansas School of Medicine. They were very anxious to expand the SAMA into all years of the Medical School as it had previously been. Mr. Webb felt that registering as many freshmen as possible brought many students into SAMA who would have otherwise not gotten into the program. They plan to continue this program. They further plan to try and interest the upper classmen in joining SAMA wherever possible.

Mr. Webb said that the SAMA program consisted of principally screening clinics at this time: Sickle Cell Screening, Diabetes Mellitus Screening, Hypertensive Screening, and others later. Mr. Webb pointed out that screening examinations were particularly suited to SAMA as it is now composed of pre-clinical students. As the students get into the upper classes of the Medical School, they will go into other types of clinic work befitting their experience. Basically, SAMA would like to try and involve as many medical students as possible in worthwhile programs.

The matter of SAMA participating in venereal disease clinics and drug abuse prevention clinics was discussed. It was felt this might be a particularly good area for SAMA to work in provided they had wide public backing and understanding.

The representatives of the Arkansas Medical Society asked the SAMA representatives whether or not finance was a problem to them at this time and the reply was in the negative for the time being; SAMA would like to call on the Arkansas Medical Society in the future for specific projects.

The Medical Society representatives stated they would like to lend all possible support to SAMA and specifically requested the SAMA representatives to let them know in what way they could be helpful.

There was a discussion as to whether or not SAMA's interest and the Arkansas Medical So-

cietys' interest overlapped and it was felt after discussion that this was the case. There was a discussion as to whether or not representatives of SAMA should attend the Pulaski County Medical Society meetings and the Arkansas Medical Society meetings. It was the feeling of both the Arkansas Medical Society representatives and SAMA representatives that this would be beneficial. Furthermore, it was suggested that the SAMA group have a scientific booth at the next scientific session of the Arkansas Medical Society.

Lastly, there was a discussion as to whether or not SAMA would like to meet on any regular basis with the representatives of the Arkansas Medical Society; the Arkansas Medical Society representatives assured them that they would be happy to do so at any time they request it.

It was felt the meeting was very beneficial in exchange of knowledge and information respectfully submitted.

#### **Committee on Emergency Health Services**

**Robert M. Bransford, M.D., Chairman**

The Emergency Health Services Committee had one meeting during the past year in Little Rock, Arkansas, in conjunction with the Board of Councilors' Winter Session. At this time, the plan of the Emergency Health Delivery Systems grant for Arkansas was presented and explained by Dr. Henderson, Director of Emergency Health Systems.

The Committee Chairman has been working on various State committees representing the Society in relation to emergency health care. It is my impression that the Committee on Emergency Health Services should be strengthened with additional members from all sections of the State. The upcoming grant for development of an Emergency Health System for Arkansas is extremely important and should be strongly influenced by the Arkansas Medical Society as to its goals and directions. This can only be accomplished through the interest and cooperation of all members of the Medical Society and its committees. These recommendations have been placed before the Executive Vice President.

#### **Medical School Committee**

**Ross Fowler, M.D., Chairman**

Three members of the Medical School Committee, Drs. Kutait, Hyatt and Fowler, Chairman, met December 3, 1972, in Little Rock, with mem-

bers of the Education Committee of the Arkansas Medical Society and members of the Medical Center.

The shortages of health manpower and health care in rural communities were again the chief topics of discussion. There was more encouragement felt at this meeting than any since the Committee was appointed, when Dean Shorey announced that the Freshman Class was increased to 121 students and all of them were from Arkansas; and when Dr. James Dennis, Vice President of Health Sciences at the University of Arkansas, announced that the Medical Center was ready to go in a "different direction" to train more family physicians and the graduating class could be increased to 170 doctors.

The desire to change the Family Practice Division at the Medical Center to a Family Practice Department, which would contain instructors capable of teaching quality care in surgery, obstetrics, pediatrics, orthopedics, etc, necessary for a rural area practitioner, was discussed and approved by this Committee.

The inequity of fees allowed by Medicare in rural areas, compared to urban areas, was discussed; and speeding up of the process of change from five geographical areas to one, state-wide area, which was approved by the Arkansas Medical Society at its last State Meeting, was recommended.

A change in the "unknown committee" for the selection of medical students was discussed, with the desire that more consideration be given the family physician, and with the thought of approving more "B" and "C" motivated students who were interested, or would sign an agreement to practice in a rural area.

The desire to expand the Medical Center facilities to have beds available for a Department of Family Practice, and to become a state-wide medical center without walls, was discussed and approved.

The Committee offered the assistance of the Arkansas Medical Society to Governor Bumpers, the Arkansas Legislature, and the University of Arkansas Medical Center for any help it might provide in improving medical care in Arkansas.

#### **Professional Services Review Organization**

**Charles F. Wilkins, Jr., M.D., Chairman**

The Professional Services Review Organization has continued to meet at the Blue Cross-Blue

Shield Building in Little Rock the fourth Wednesday of each month. The committee consists of 21 family practitioners and specialists, plus the Executive Committee of the Council of the Arkansas Medical Society and the Chairman. In addition, a sub-committee of sub-specialists are on call to meet with the Review Organization as needed. This has been particularly active in the case of Plastic Surgery. During the past year, an Oral Surgeon was added to the committee of sub-specialists at the request of the Arkansas Dental Association.

The PSRO serves as an advisory committee to the Medical Director of Blue Cross and Blue Shield for consideration of claims under Medicare, Champus and Blue Cross-Blue Shield programs. In addition, the committee has been instructed by the Council to serve as a referral point for the HIP committee for cases involving commercial insurance companies. Although there have been few requests for peer review from other carriers in the past, there is considerable interest in this phase at this time. Representatives of Aetna Insurance Company met with the PSRO to observe its workings and, at present, are in the process of referring cases for review.

It is to be expected that the character of the Professional Services Review Organization will change in the not too distant future due to the passage of Public Law 92-603 with its provision for the establishment of Professional Standards Review Organizations. Because of the foresight of the Council of the Arkansas Medical Society and the House of Delegates of the Arkansas Medical Society, it is felt that Arkansas will be in much better shape to undertake such reorganization than many states.

#### **First Councilor District Professional Relations Committee**

**F. E. Utley, M.D., Chairman**

The Professional Relations Committee of the First Councilor District has had no complaints during the past year.

#### **Second Councilor District Professional Relations Committee**

**C. W. Jackson, M.D., Chairman**

The Second Councilor District Professional Relations Committee had no business to transact during the year of 1972.

**Fourth Councilor District Professional  
Relations Committee**  
**Sanford C. Monroe, M.D., Chairman**

This committee has not been presented with any case or problems that have required action of the committee in the past year.

It has not been necessary for the committee to meet for any other reason.

**Fifth Councilor District Professional  
Relations Committee**  
**J. B. Wharton, Jr., M.D., Chairman**

In the calendar year from April 1972 to February 1, 1973, there have been no cases reported concerning professional relations in the Fifth Councilor District.

I feel this is quite a compliment to the doctors and to the Society as a whole.

**Sixth Councilor District Professional  
Relations Committee**  
**Paul Hughes, M.D., Chairman**

The Professional Relations Committee of the Sixth Councilor District has had no cases brought before it during the past year.

**Seventh Councilor District Professional  
Relations Committee**  
**C. F. Peters, M.D., Chairman**

The Seventh Councilor District Professional Relations Committee has had no cases come before the committee this year.

**Eighth Councilor District Professional  
Relations Committee**  
**Richard M. Logue, M.D., Chairman**

Matters that came before the Eighth Councilor District Professional Relations Committee have been handled without conflict. As chairman, I am again impressed with the generally good relationships between the Medical Society members and the public.

**Ninth Councilor District Professional  
Relations Committee**  
**Ross Fowler, M.D., Chairman**

The Ninth Councilor District Professional Relations Committee is pleased to report that no grievances have been brought before it during the past year.

**Report of the  
Eighth Councilor District**  
**W. Payton Kolb, M.D., Councilor**

As the Pulaski County area makes up the Eighth Councilor District, a report from this district is a report of the activities of that component medical society. This district has been active. We would like to report the following as the most important accomplishments.

A study was made of the feasibility of applying for a grant to study the possibility of the establishment of an HMO on a county-wide basis. It was found that sufficient funds were not available for this; consequently, this was eventually dropped.

The Honorable Archie House, an attorney in Little Rock, has served for a number of years as a member of the County Medical Society's Mediations Committee. He has served faithfully and long in this task. He has recently retired. In view of his long and faithful service, he was honored and was presented with a plaque thanking him for his services.

The district participated with Dr. Gerald Laros of the American Academy of Surgery in the development of a training course on emergency care.

A grant of \$300.00 was made to the University of Arkansas Medical Center Library.

The Blood Bank Committee of the Pulaski County Medical Society began a study of independent blood banks in the area. This study is still going on at this time.

The Little Rock City Board studied some proposed amendments to the ordinance restricting ambulances from moving beyond the usual traffic ordinances. This original ordinance had been sponsored by the Pulaski County Medical Society and has been working extremely well. The Society worked with the City Board in demonstrating how well this had worked and in defeating the proposed amendments.

The Society furnished matching funds for the Central Arkansas Planning Council and its work.

In the area of public relations, the Pulaski County Medical Society's Speakers Bureau was quite active. The Society also participated in the Red Cross Blood Bank Drive at the University of Arkansas at Little Rock. The Society provided a scholarship in the amount of \$100.00 to the

Organization on Campus that did the best recruiting of donors. It also provided a \$50.00 scholarship to an individual in the same campaign. The Society financed a drug educational program with the Boy Scouts.

Several very interesting programs were held during the past year by the district. In June, a picnic was sponsored honoring the interns and residents in the area. In September, Mr. Gene Warren presented a program outlining the newer drug regulations. In November, the Director of the National Center for Toxic Research in Pine Bluff was a very interesting speaker. Officers were elected at this time. In December, a dinner meeting was held with the spouses in which the officers for 1973 were installed and the guest speaker was Lieutenant Governor Bob Riley. In January, a dinner meeting was held with the members of the Legislature from Pulaski County. This was very interesting and informative. In March, the speaker will be Dr. James Dennis of the University Medical Center.

The district regrets to have to announce the passing of two of its members and close friends during the past year—Dr. Walter G. Eberle, II, and Dr. Nicholas W. Riegler, Sr. It also took note of the passing of Dr. Louis Cohen who for many years resided and practiced psychiatry in Little Rock. Dr. Cohen, on retirement, moved back to his original home in Nebraska. Appropriate memorial resolutions were written and passed on all of these.

### **Report of the Council**

#### **C. C. Long, M.D., Chairman**

The Council of the Arkansas Medical Society met on Saturday, July 29, 1972, at the Sheraton Hotel in Little Rock and transacted the following business:

1. Approved the purchase of an automobile for the use of the Society's public relations and field representative.
2. Directed the Society attorney to protest the filing for increased rates by Aetna on its policy for physicians' malpractice insurance.
3. Voted to implement the following proposals for Constitutional amendments pending their approval by the House of Delegates.

A. Councilors to be required to submit to the Council a written report of the activities within their district.

B. Holding of councilor district meetings to be required annually.

C. The three Society Vice Presidents to be responsible for stimulating activity of, maintaining liaison with, and guiding the committees of the Society.

4. Nominated the following for vacancies on American Medical Association councils and committees:

Ben N. Saltzman: Council on Environmental and Public Health; Council on Voluntary Health Agencies

W. Payton Kolb: Council on Mental Health

C. Randolph Ellis: Committee on Medicine and Religion

Morriss Henry: Council on Legislation

5. Voted to approve the concept of a Foundation for Medical Care and authorized work to begin on the establishment of a Foundation. Same motion approved proposed by-laws for the Foundation as presented by the committee.

6. Appointed Kenneth Jones of Little Rock to replace Austin Grimes as the Orthopaedic representative on the Professional Services Review Organization.

7. Authorized members of the Professional Services Review Organization to send a substitute to attend meetings when the member is unable to do so. The substitute was authorized voting privileges.

8. Appointed E. L. Hutchison of Pine Bluff and Sybil Hart of Blytheville to the Ark-Pac Board.

9. Requested the Executive Committee to select Society representatives for the Health Careers Council and MEDIHC.

10. Voted a budget increase of \$5,000 to cover cost of an additional employee and a part-time employee.

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The Council met on Sunday, August 13, 1972, at the Ramada Inn in West Memphis, and transacted the following business:

1. Delegated authority to the Society's Insurance Committee to appoint the Raney

Insurance Agency as exclusive representative for a period of six months for the purpose of researching and developing an insurance program.

2. Assigned specific committees to the three Vice Presidents who are asked to furnish guidance and stimulation to the committees.
3. Voted approval of the Executive Committee meeting with the Insurance Commissioner to protest Aetna Insurance Company's malpractice liability insurance rate increase.

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The Council met on Sunday, September 24, 1972, at the Holiday Inn in Pine Bluff, and transacted the following business:

1. Appointed R. Fred Broach to the Professional Services Review Organization to replace Dr. Busby for a term expiring in April 1973.
2. Elected Boyce West of Clarksville to a place on the Tenth Councilor District Professional Relations Committee.
3. Voted to notify Aetna Insurance Company that the Society finds no reason to withdraw its sponsorship of the St. Paul malpractice liability insurance program to sponsor an Aetna program.
4. Withheld action on the Family Health Center Project of the United States Public Health Service pending presentation of a specific proposal.
5. Approved annual report of audit of the Arkansas State Medical Board.
6. Authorized expenses for Mr. Warren to attend an AMA seminar on Price Commission regulations.
7. Approved a decision by the Annual Session Committee to schedule a golf tournament during the 1973 Annual Session, provided no awards are presented during the inaugural banquet.
8. Authorized expenses for Mr. Warren to attend a legal workshop in Cincinnati in November.
9. Voted to restrict listings in the Physicians' Directory section of the Journal of the Arkansas Medical Society to members of the Arkansas Medical Society.

10. Approved State Health Department action in placing Talwin on the list of "scheduled" drugs.
11. Approved a request by C. R. Ellis for \$300 with which to conduct the physician-clergy conference on medicine and religion.
12. Approved Elvin Shuffield serving on a committee to work with the Governor on the budget for the Public Health Department.

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The Council met on Sunday, December 3, 1972, at the Sheraton Hotel in Little Rock, and transacted the following business:

1. Approved the "unified credit plan" for AMA-ERF contributions in Arkansas, giving the Auxiliary project credit for all contributions.
2. Authorized the Executive Committee to designate representatives to attend the AMA Leadership Conference in Chicago.
3. Voted to sponsor a Mediterranean Adventure by International Travel Advisors as a travel program for Society members.
4. Agreed to co-sponsor with the Hospital Association an institute June 1-3, 1973, for hospital trustees, administrators and physicians.
5. Endorsed the Children's Medical Camp sponsored by Pediatric groups and voted to contribute \$90 for three camp scholarships.
6. Nominated Glen Baker of Jonesboro for the first congressional district vacancy on the State Board of Health.
7. Voted to appoint a committee to investigate the feasibility of establishing a medical museum for the State.
8. Endorsed the Uterine Cancer Task Force program of the Cancer Society.
9. Approved in principle legislation proposed by the Arkansas Family Planning Council removing age restriction on birth control counseling.
10. Endorsed legislation to make it possible for Mr. Warren to serve as attorney for the State Medical Board.
11. Voted to assist the Auxiliary by a loan of \$500 for the purchase of placards on mouth-to-mouth resuscitation, which are to be sold by the Auxiliary.

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The Council met on Sunday, February 4, 1973, at the Sam Peck Hotel in Little Rock, and transacted the following business:

1. Authorized travel expense for Mr. Warren to attend a medicolegal conference in Las Vegas.
2. Approved Executive Committee action:
  - A. Appointing Henry Kirby and G. Allen Robinson as a Medical Museum Committee.
  - B. Meeting with the Welfare Commissioner to discuss the Welfare Commission's proposal for a Hospital Admission Surveillance Program.
  - C. Designating George Mitchell and Mr. Schaefer to attend a National Governors' Conference in New Mexico on PSRO's.
3. Reaffirmed its appointment of Robert McCrary as the Obstetrics-Gynecology representative on PSRO for a term expiring in 1975.
4. Received a report from legal counsel, Mr. Warren, that as a result of the Society's protest that the Aetna Insurance Company had withdrawn its request for a malpractice liability insurance rate increase.
5. Upon the request of the chairman of the Eye Section of the Society, voted to withdraw support of House Bill 332, a measure to establish regulations governing physician's assistants in Arkansas.
6. Heard a lengthy report on legislative activity by the chairman of the Legislative Committee, Dr. Elvin Shuffield.
7. Designated five representatives to attend AMA-AMPAC workshop in Washington in March.
8. Named William S. Orr a member emeritus of the Ark-Pac Board.
9. Directed that the Society try to keep abreast of the development of PSRO rules and regulations and to activate the Foundation for Medical Care only as required by developments.
10. Directed that the Executive Committee appoint a committee to assist the American Medical Association in its membership drive.
11. Heard Mr. Paul Berry, representing Senator John McClellan, offer the Senator's assistance in any program the Society might suggest to help alleviate the shortage of physicians in rural Arkansas.
12. Approved the budget as presented by the Budget Committee, with the exception of recommendations made by the committee on the earmarking of \$5 dues for the Medical Education Foundation for Arkansas.
13. Directed that in view of the fact that the Society's Pension Trust is inadequately funded that the Society give letters to its senior employees guaranteeing them that the Society will pay sufficient money into the Pension Trust to provide the benefits as set forth in the Arkansas Medical Society Employees Pension Trust.
14. Asked Dr. Watson to discuss future policy regarding Medical Education Foundation donations to the Medical Center with the Board of the Foundation and report back to the Council.

**Report of the Executive Vice President  
Mr. Paul C. Schaefer**

The attention, as well as the time and effort, of medical organization is monopolized more each year by the government. The threat of encroachments on the right of the physician in private practice to practice as he thinks best for the patient increases daily. Temptations for organized medicine to partake of Federal money abound. Programs such as peer review and hospital admissions surveillance programs not only offer opportunity for income-producing activities but also present a threat that laymen or institutions will take over control and regulation of the practice of medicine if medicine rejects proffered opportunities to set up such regulatory boards as PSRO's. Decisions on whether or not to join such programs are difficult. It is anticipated, however, that the Arkansas Medical Society will do what must be done in the best interest of the patients and of its members.

The Arkansas Foundation for Medical Care is a mechanism created by the Medical Society which stands ready to assume such tasks as peer review and hospital admission surveillance. The Council and the headquarters office expend a great deal of effort and attention to stay abreast of developments in these fields to be ready to activate the dormant Foundation in time to pre-

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vent the control of the programs from falling into alien hands.

The cooperation and understanding of all members of the Medical Society will be required during the early days of the organization and implementation of peer review. The headquarters office' experience in administering the old CHAMPUS program will stand the Society in good stead.

The coming years present great challenges to the medical profession and its representatives' initiative, adaptability, perserverance, and willingness to work.

**Budget Committee**

**H. W. Thomas, M.D., Chairman**

The Budget Committee submitted the following budget for 1973. It has been approved by the Council.

**INCOME**

Budget Item	1973 Budget	
Membership Dues	\$162,840.00	
Journal Advertising		
Local	\$ 8,500.00	
National	27,000.00	35,500.00
Booth Income		7,100.00
Annual Session Income		1,750.00
AMA Reimbursement		1,165.00
Miscellaneous & Rosters		500.00
Interest on Government Securities	11,000.00	
Retirement (Employee Contribution)	475.00	
Specialty Desk		530.00
	-----	
		\$220,860.00

**EXPENSES**

Salaries			
Society	\$51,920.00		
Public Relations	10,800.00		
Journal	14,500.00		
Exhibit	400.00	\$ 77,620.00	
Travel & Convention			
Society	14,800.00		
Public Relations	5,500.00		
Journal	600.00	20,900.00	
Taxes			
Society	3,450.00		
Journal	850.00		
Exhibits	700.00	5,000.00	
Retirement			
Society	24,576.00		
Journal	2,400.00	26,976.00	

Stationery & Printing			
Society	1,720.00		
Public Relations	100.00		
Journal	350.00		
Exhibits	30.00	2,200.00	
Office Supplies & Expense			
Society	4,000.00		
Public Relations	100.00		
Journal	900.00	5,000.00	
Telephone & Telegraph			
Society	2,530.00		
Public Relations	500.00		
Journal	220.00		
Exhibits	50.00	3,300.00	
Rent			
Society	4,980.00		
Journal	1,020.00	6,000.00	
Postage			
Society	5,600.00		
Public Relations	50.00		
Journal	1,800.00		
Exhibit	50.00	7,500.00	
Insurance & Bonds			
Society	3,570.00		
Journal	730.00	4,300.00	
Auditing			
Society	625.00		
Journal	125.00	750.00	
Council Expense			1,200.00
Journal Printing			26,500.00
Annual Session			
Society	7,700.00		
Exhibits	1,950.00	9,650.00	
Winter Meeting			1,300.00
Senior Medical Day			—
Dues and Subscriptions			
Society	5,250.00		
Journal	350.00	5,600.00	
Gifts & Contributions			
Society	885.00		
Journal	25.00	910.00	
Woman's Auxiliary			1,200.00
Legal Services			
Society	3,720.00		
Journal	680.00	4,400.00	
Special Committee			
Society	300.00		
Public Relations	—	300.00	
Rural Health			500.00

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Miscellaneous		
Society	40.00	
Public Relations	—	
Journal	—	40.00
Freight & Express		
Society	—	
Public Relations	—	
Journal	—	25.00
Office Equipment		
Society	750.00	
Journal	—	750.00
	—————	
		\$211,921.00

**Arkansas Drug Abuse Authority**  
**Amail Chudy, M.D., Representative**

The Arkansas Drug Abuse Authority, one of the youngest groups in the State of Arkansas, has met on two occasions during the year of 1972 to establish as much action as possible in Arkansas regarding drug abuse.

The committee is composed of a scattering of people from all walks of life and some of the most enthusiastic people that I have had the pleasure of working with.

Although this Authority is very young in its age, the committee is made up of many wonderful people who have devoted many precious years of their lives to the people of Arkansas. I certainly feel that the representation of the Arkansas Medical Society on the Arkansas Drug Abuse Authority was a blessed one.

Presently, one of the greatest problems which is facing the Authority is trying to find some place to treat the acute drug withdrawal patient. I am hoping that the House of Delegates at its Spring Meeting in Hot Springs will try and consider some recommendation to this committee and the governing body of the State of Arkansas for finding a place regarding therapy for the acute drug abuser.

**Arkansas Political Action Committee**  
**William S. Orr, Jr., M.D., Chairman**

Ark-Pac had a very successful year. Our membership reached an all-time high. We were one of 14 states to receive national recognition for our membership efforts. We had excellent support from the Auxiliary and they deserve much of the credit. We were successful in our efforts in two State races and unsuccessful in one. Ark-Pac is an integral part of AMPAC. AMPAC

supported 28 Senatorial races and were successful in 19; supported 223 Representative races and were successful in 184.

Your Ark-Pac Board wishes to express to all members our thanks, and hopes each member of the Arkansas Medical Society and the Auxiliary will continue to take an even more active part in the political activities of their locality as well as in the State and nation.

Your membership in 1973 is urgently needed. A dues statement for Ark-Pac was enclosed with your local medical society statement. If you have not responded, we urge you to do so at once.

**Arkansas State Arbitration Commission**  
**H. Austin Grimes, M.D., Chairman**

The Arbitration Commission met only one time officially, and this case was settled to the mutual satisfaction of both parties. The parties involved will remain anonymous unless a bona fide need to know exists.

Two other cases were offered and one of these failed due to lack of cooperation of the physician and has not been settled to my knowledge. The other case was discussed by the physician and the Chairman, and an amicable solution occurred.

The physicians who served on the Commission were selected at random and they served unselfishly of their time and opinions. This spirit of cooperation is deeply appreciated by all concerned, especially myself.

**Report of the Arkansas State Medical Board**  
**January 1, 1972 - January 1, 1973**  
**Joe Verser, M.D., Secretary**

The Secretary of the Arkansas State Medical Board makes the following report of the activities of this board since the last meeting of the Arkansas Medical Society:

The officers and members are as follows:

Hugh R. Edwards, M.D., President

Ross Fowler, M.D., Vice-President

Joe Verser, M.D., Secretary-Treasurer

Frank M. Burton, M.D.

John F. Guenthner, M.D.

George F. Wynne, M.D.

C. Stanley Applegate, Jr., M.D.

H. Elvin Shuffield, M.D.

Bascom P. Raney, M.D.

Eugene R. Warren, Legal Investigator

During the past two years, the State Medical Board has licensed twenty-seven Osteopathic phy-

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sicians under the grandfather clause and four by reciprocity. Since the 1971 General Assembly, the State Medical Board has licensed nineteen foreign graduates.

A yearly financial report of the board's activities, prepared by Johnston, Freeman & Jones, C.P.A., was sent to and approved by the Council of the Arkansas Medical Society.

The board investigated every case of violation of the Medical Practices Act reported to the secretary during the year. Following is a summary of the board's proceedings.

**Physicians registered for 1972:**

Resident	1,886
Non-Resident	1,450
Physicians licensed by examination	117
Physicians licensed by reciprocity	35
Physicians certified to other states	139
Licenses revoked for non-payment of annual registration fee	36
Licenses suspended for non-payment of annual registration fee	54
License suspended for violation of Medical Practices Act	3
Cases pending for violation of Medical Practices Act	5
Injunctions issued	1

**ARKANSAS STATE MEDICAL BOARD**

**BALANCE SHEET**

**June 30, 1972**

**ASSETS**

Cash in banks	
Bank of Weiner, Weiner, Arkansas	
Certificate of Deposit #362	\$ 8,553.71
Certificate of Deposit #392	2,746.35
	<u>\$11,300.06</u>
Cash on hand	
Bank of Harrisburg, Arkansas	
Checking Account	\$31,097.65
Certificate of Deposit #519	12,999.70
	<u>44,097.35</u>
Office equipment	
	<u>3,187.27</u>
TOTAL ASSETS	<u>\$58,622.18</u>

**LIABILITIES AND SURPLUS**

**LIABILITIES**

Withholding and FICA taxes deducted and unpaid for the quarter ended June 30, 1972	\$ 349.17
SURPLUS	
Balance at beginning of year	\$49,515.04
Add: Excess of receipts over disbursements for year ended June 30, 1972 (Schedule 2)	\$8,840.74

Less: Increase in payroll taxes withheld but not remitted at June 30, 1972	(82.77)	8,757.97	58,273.01
<b>TOTAL LIABILITIES AND SURPLUS</b>			<b>\$58,622.18</b>

Other office equipment fully depreciated ..... \$ 2,200.00

**Summary of Arkansas State Department of  
Health Activities**

**J. A. Harrel, Jr., M.D., Director**

Today much attention is being given to the rising demand for quality health services for all citizens, both in the private and public medical domains. The Arkansas State Department of Health, under the innovative and energetic leadership of Dr. John A. Harrel, is making a concerted effort to meet the ever increasing needs for public health services for the people of this State.

The Arkansas State Department of Health is one of thirteen major state agencies with a 12 member State Board of Health acting in an advisory capacity. The Department organization recently has been revised to define five major bureaus: Administrative Services, Medical Care Services, Health Facility Services, Environmental Services and Consumer Protection Services.

**ADMINISTRATIVE SERVICES**

**Division of Public Health Education**

With the hiring of a qualified Director and an increase in staff personnel, the Division of Health Education has done much to create a new image of the Health Department to the public and has begun to fulfill the goal of maintaining, improving and promoting health education.

New activities include public relations with the mass media and other state agencies, departmental orientation programs for staff and health education students, program planning for co-ordination with interested parties, securing speakers and services to the local Health Departments. Staff personnel meet with many groups and attend many meetings assisting, planning and coordinating health programs. Cooperating with other agencies, civic and church groups, schools and universities, as well as local Health Departments, they participate in conferences, seminars, workshops and county fairs, all geared to improve the health of Arkansas' population.

The film library meets the ever increasing requests for health films that are shown through

the local Health Departments to schools, civic organizations and other interested groups. Pamphlet literature was distributed through these same sources as well as to individuals.

#### **Personnel Section**

The Personnel Section of Central Administration is responsible for recruitment and coordination of all health personnel records with offices of the State Merit System and the Department of Administration and Finance. At the present time, there are approximately 1200 Health Department employees.

#### **Accounting Division**

The Accounting Division handles all purchase requests of the Department and its data processing equipment ensures a modern system of record keeping.

#### **Bureau of Vital Statistics**

The Bureau records all live births, deaths and fetal deaths in the State of Arkansas. These certificates are bound in volumes and indexed. Death certificates are coded as to primary statistical cause of death and statistical reports are prepared from punch cards which contain data from original documents. Copies of death records are issued to county clerks to maintain accurate voter registration.

Marriage, divorce and annulment records are maintained as well as adoptions, legitimations and changes of name.

Photostat copies of vital events are issued. During the fiscal year 1971, an average of 648 copies were issued per work day.

#### **Building Maintenance**

Building Maintenance and Operation is charged with the complex upkeep of the large building and grounds, mail room operations and equipment inventory.

### **MEDICAL CARE SERVICES**

#### **Division of Chronic Disease Control**

The Division of Chronic Disease Control provides services in several areas of chronic illness. A Diabetic Screening Program for high risk individuals is carried out through local Health Departments. In cooperation with the Division of Public Health Nursing and the Bureau of Laboratories, assistance is given the State Economic Opportunity Office in an anemia and diabetes screen program for the medically indigent. Con-

venient mailing kits are supplied practicing physicians through local Health Departments for rapid processing of throat swab specimens by the Bureau of Laboratories to reduce and prevent heart damage and rheumatic fever, the sequela of hemolytic streptococcal throat infections.

The Arkansas Cancer Registry receives Tumor Registry Abstracts from hospital and area cancer registries and maintains reciprocity with cancer registries in other states for furnishing and requesting data.

#### **Division of Public Health Nursing**

Provided are nursing service consultation and planning and supervision to public health nurses on the local level to implement programs related to other divisions of the Department.

During fiscal year 1971 a total of 672,970 patient visits were made. Nursing service included home, office and clinic visits at the local Health Department level. During the past year, the Nursing Division contracted with the Department of Social and Rehabilitative Service to furnish home health visits to welfare recipients.

#### **Division of Maternal and Child Health**

The Division of Maternal and Child Health provides family planning and maternity clinics through local Health Departments. Also provided are pap smears for cancer screening, laboratory studies, prenatal and postpartum care, physical examinations and nursing and nutritional counseling.

The Maternity and Infant Care Project is a combined project with the University of Arkansas Medical Center. Patients evaluated in local health departments are from a ten-county area, Pulaski, Jefferson, Lonoke, Grant, Garland, Saline, Perry, Arkansas, Conway and Hot Spring, and are given a comprehensive care program for both mother and child who have high risk problems of delivery or infant morbidity and mortality. Prenatal, postpartum and infant care also is provided with no financial charge to these families.

Well Child Clinic services have expanded in cooperation with the Department of Social and Rehabilitative Services to provide a Health Screening Program for AFDC and FC children under six years of age. Nutritional services encompass assistance to physicians, hospitals, nursing homes and various clinics in local Health Departments. The Division also offers vision

and hearing screening services arranged through schools and PTA groups.

The Handicapped Children's Center offers medical, social, psychological, dental, speech, audiology and vision evaluations and therapy as a special emphasis on a comprehensive program. Consultations were provided by neurologists, psychiatrists and ophthalmologists.

#### **Bureau of Dental Health**

The Bureau maintains a program in dental education, preventive dentistry and delivery of corrective dental care. Consultative services are given to agencies and municipalities relative to dental programming, fluoridation of water supplies, establishment of coordinated dental facilities and coordination of State and Federal dental programs. Arkansas is 11th in the nation in fluoridation of available water supplies.

#### **Division of Communicable Diseases**

The Division maintains chest clinics and provides tuberculin testing material to health units, hospitals and physicians. The recent Special Session of the Legislature transferred funds from the Tuberculosis Sanatorium at Booneville to the Health Department which allowed for expansion of the clinic program. General hospitalization for tuberculosis cases and suspects became a reality at St. Bernard's Hospital in Jonesboro and Jefferson Hospital in Pine Bluff. Several other hospitals have been named to help provide adequate TB treatment and control.

The Venereal Disease Control Program received a grant in 1972 from the U.S. Public Health Service to combat the rapid increase of gonorrhea in Arkansas. Additional personnel made attempts to halt the rise of gonorrhea from these approaches: (1) women who received pelvic examinations were screened for gonorrhea by routine cultures, (2) field investigators conducted epidemiologic follow-up on all reported cases of gonorrhea in males to obtain female contacts for treatment and (3) a new educational program was aimed at increased public awareness of venereal disease problems.

Activities of State-wide Immunization Programs are directed toward immunization of children susceptible to measles, rubella, poliomyelitis, tetanus, whooping cough and diphtheria. Vaccines were made available through regularly scheduled Immunization Programs. Since 1970,

approximately 275,705 children have been immunized in rubella campaigns.

#### **Division of Veterinary Public Health**

The Division of Veterinary Public Health provided assistance to urban and rural communities in prevention, control, management and suggestions for treatment of zoonotic diseases and disease conditions common to man and animal. They establish and maintain a source of information on rabies in animal and man, with recommendations for methods and procedures for control.

There were 132 cases of animal rabies reported in Arkansas in 1971. Animal bite exposures totaled 1,281 and 2,907 single doses of duck-embryo rabies vaccine were administered.

#### **Division of Meat Inspection**

The Division of Meat Inspection provides full-time continuous Arkansas State inspection to 95 licensed plants. Another 48 licensed custom-exempt plants are under sanitation, labeling and adulteration control surveillance.

The Arkansas Meat Inspection Regulations serve Arkansas' needs by providing health protection to consumers of meat and meat products from diseases transmissible by animal to man upon consumption of meat products that may have been contaminated or adulterated during processing, transportation or storage.

#### **Division of Emergency Health Services**

The Division of Emergency Health Services is responsible for the administration of standards of the Highway Safety Act as it pertains to ambulance personnel, equipment and supplies. It develops emergency preparedness programs for times of disaster, coordinates aspects of the Hospital Reserve Disaster Inventory, Packaged Disaster Hospitals and Hospital Reserve Disaster Inventory and conducts courses for special groups in the areas of Medical Self-Help and Cardiopulmonary Resuscitation.

A \$3.39 million grant will be used over a three-year period to develop a State-wide approach to implement communications, transportation facilities and training necessary for State-wide Emergency Medical Services.

### **HEALTH FACILITY SERVICES**

#### **Bureau of Laboratories**

The 21 units (15 laboratories) of the Bureau provided needed laboratory services, particularly

in the area of microbiology to Divisions and Bureaus of the State Department of Health, local Health Departments and also serve practicing physicians, clinics and hospitals providing services they cannot or do not provide for themselves, and act as a reference laboratory to other laboratories throughout the State.

The Special Bacteriology laboratory has recently begun a new program of gonorrhea culture to help eradicate this disease. A modest program for detection of sickle cell anemia was started which was limited at first to family planning clinics. The program is expected to grow and include sickle cell screening as funds become available.

The Bureau participated in check sample testing survey with the U. S. Public Health Service and the Basic series from the College of American Pathologists.

#### **Division of Hospitals and Nursing Homes**

The Division of Hospitals and Nursing Homes has a multiplicity of duties and responsibilities regarding Arkansas health care facilities and health care and safety for patients who use them. They administer aspects of the Hill-Burton Program for construction of hospitals and health facilities and Federal Aid Programs for construction of community mental health centers and facilities for the mentally retarded. Certification of hospitals, home health agencies, extended care facilities and various laboratories is provided. Licensing and regulation of hospitals and nursing homes, licensing of nursing home administrators and administration of the Architectural Barrier's Law are further services.

#### **Bureau of Environmental Services**

The Bureau's primary responsibility is the environmental human contact of the citizens of Arkansas. Functions and responsibilities include monitoring evaluation and institution of programs so Arkansas citizens can be assured that contaminants in our environment are kept as low as possible and are at least safe for them to live within.

#### **Division of Radiological Health**

The Division of Radiological Health provides for development, control and regulatory programs for sources of ionizing radiation and other radiation that might be produced during operation of electronic products.

#### **Division of Occupational Health**

The Division of Occupational Health coordinates aspects of the Health Section of the Occupational Safety and Health Act with the Department of Labor in reference to health hazards.

#### **Division of Blood Alcohol Analyses**

The Division of Blood Alcohol Analyses performs tests for alcohol content of blood, breath and urine samples, conducts training courses on the gas chromatograph for law enforcement officers, certifies breath-testing installations and maintains Blood Alcohol Report Forms.

#### **Division of Drug Abuse**

The Drug Abuse Authority has two operating sections (Division of Drug Control and Division of Planning and Coordination) to coordinate activities for planning, program development and establishment of controls governing legitimate handlers of controlled substances, establish procedures for destruction of surrendered drugs and serves as a center of drug dispensing for the Health Department.

#### **Division of Environmental Surveillance**

The Division of Environmental Surveillance makes chemical analyses of water supplies to ascertain if the supplies meet current standards.

### **CONSUMER PROTECTION SERVICES**

#### **Division of Engineering**

The Engineering Division reviews plans for municipal water and sewer systems, mobile home parks, and swimming pools. They conduct exams for water works licensing and issue permits for marine sewage disposal systems and swimming pools. Also provided are counsel and advice on environmental health problems and provision of educational courses in water treatment.

#### **Division of Plumbing**

The Division of Plumbing promoted adoption of plumbing codes by municipalities, conducted training schools for plumbing inspectors and plumbers, licensed Master and Journeymen plumbers and registered Apprentice plumbers. They review plans and specifications of specific plumbing installations. Revisions were made on the State Plumbing Code to meet Federal requirements.

**Division of Food Services  
(Milk and Dairy Products)**

The Division controls sanitary aspects of production, processing and distribution of milk and dairy products. They promote, supervise and conduct surveys, studies and evaluations of sanitary conditions. They also review and approve plans and specifications for new milk processing plants and receiving stations and assist in promotion and development of effective milk laboratory programs by consultation and education services to milk laboratories and dairy industry. Sanitation ratings of milk sheds and efficiency surveys of milk control aids also are conducted.

**Division of Food Services  
(Food and Drug Control)**

The Division of Food and Drug Control provides inspection of food storage, school lunch rooms, and food processing plants in counties with no sanitarian. They review plans and specifications for food service establishments, review proposed labeling of foods, provide routine food sampling investigations in food borne disease outbreaks and obtain food samples for chemical or visual violations of the Food, Drug and Cosmetic Act.

**Report of the Arkansas Regional  
Medical Program**  
**Robert Watson, M.D.**  
**Member of Regional Advisory Group**  
**Executive Committee**

At this time last year, there was printed in the Journal of the Arkansas Medical Society a report summarizing the background, the organizational arrangement, and the accomplishments of the Arkansas Regional Medical Program at that date. A review of that report would be informative.

In brief, it was expressed that the long range goal was to improve the health care of all the citizens of Arkansas, not in establishing and maintaining actual treatment centers, but, instead, in developing and initially financing deserving ventures that, in time, would, through their own merits, become established programs. Basically, it was a plan for development toward self-supporting status, and not one of never-ending dependence.

Since its inception in 1969, the Regional Medical Program has spent some \$3½ million of Federal funds in Arkansas toward training of

health personnel, providing equipment, and organizing programs to deliver health services.

Probably the most noteworthy accomplishment has been assisting in the development of the Kidney Transplant Program at the University of Arkansas School of Medicine, together with a program making home care kidney dialysis available throughout the State.

Regional Medical Program has been instrumental in the development of some sixty coronary care units over the State, and a continuing training program at the Medical School is available to the doctors over the State in the training for and management of problems of coronary care.

A continuing medical education extension program provides for faculty from the Medical School and the Veterans Administration Hospitals to visit with the physicians over the State in evaluating local diagnostic problems, review of patient records, and to offer consultation aid. Likewise, plans for further education and training programs at all levels of health care are under continuing evaluation.

A statement from our report of last year has continued to prove its truth, "The Arkansas Regional Medical Program has been very active. Leadership is in the hands of dedicated and capable individuals, and the administration has been careful and conscientious in considering the needs of all communities within the State, and not just the central or larger areas."

The Regional Advisory Group that hears the need and passes judgment on innumerable proposed projects is made up of 53 individuals from over the State, consisting of a full representation from practically every reasonable source for intellectual guidance. The diversity of the Advisory Group has consistently proven its worth through its stabilizing judgment.

The Arkansas Regional Medical Program has now been functioning for four years. Innumerable worthwhile advances in the meeting of many of the urgent medical needs of the people of Arkansas have been identified and placed upon self-supporting levels. Many of those most pressing immediate needs have been met which, in turn, permits room for innumerable other projects to arise for consideration, oftentimes some of dubious quality.

President Nixon's budget proposal calls for searching scrutiny of some of our present health

programs. Obviously, ineffective programs must be acknowledged as such, realizing that common judgment dictates the continuing of worthwhile programs the Arkansas Regional Medical Program has brought about.

Likely some form of National Regional Medical Program funding will survive, providing its bureaucratic processes can be put under reasonable limitation.

#### **Report of Arkansas Regional**

#### **Medical Program**

**Ross Fowler, M.D.**

#### **Member of Regional Advisory Group**

Despite limited financial support from the Administration, the Arkansas Regional Medical Program can view the record of the past year as one of solid accomplishment.

Part of this record is the result of ARMP initiatives in securing funds for Arkansas from other federal agencies. In this category is \$300,000 for the Arkansas Center for Health Statistics, and the \$3,400,000 contract for Emergency Medical Services system being administered by the Arkansas Health Systems Foundation. This agency itself was funded by a grant initiated and submitted by ARMP.

Arkansas' need for trained personnel to man Coronary Care Units continues to be met by the Nurses Training Course at the Baptist Medical Center, which was funded through December, 1972. The five-day course for physicians at the University of Arkansas Medical Center is continuing on a tuition basis. Sixteen Arkansas physicians availed themselves of this opportunity in 1972. The fact that these projects, like thirty-one others initiated by ARMP, are being continued without further federal assistance is convincing evidence that projects have been carefully planned and selected to meet the real needs of the State.

Other activities in heart disease include our Cardiac Rehabilitation project, which is well underway. This, hopefully, will lead to the establishment of cardiac rehabilitation facilities in all of our major out-lying hospitals. We have also supported remote cardiac monitoring of patients in Western Arkansas and in Mississippi County. This development should permit our smaller hospitals to offer first class coronary care near to the patient's home.

The ARMP-funded Kidney Disease Project has provided this State a capability for the treatment of end-stage kidney disease that is not excelled anywhere among the states. In a year and a half of operation, tissue typing and organ preservation services have been established, 32 patients have received a transplanted kidney, and 28 have been trained to perform their own dialyses at home. Back-up dialysis facilities have been established at ten community hospitals, so that over 90% of Arkansans are within 75 miles of such a center. Fifteen local physicians have been trained in the management of the uremic patient and 18 nurses have received a four-week course in performing dialysis treatment.

One of our major objectives since the inception of our program has been to break down the barriers that have operated to isolate the Medical Center from the practicing physician throughout the State. This past year saw the Medical Extension Project become operational on a state-wide basis. In this program, 47 specialists from the Medical Center-VA Hospital complex made 133 visits to 27 Arkansas communities and made consultative rounds with a total of 972 local physicians, seeing local patients, reviewing records, and outlining the most recent diagnostic and therapeutic methods. The opening of this two-way channel of communication should lead to a new awareness of needs and problems that will make a lasting contribution to Arkansas medicine. The dial access activity was expanded to include nurses and the University of Missouri telelecture program was made available to thirteen hospitals in Arkansas.

President Truman once remarked that the President's main job was "trying to persuade people to do what they should be doing anyway." We believe that ARMP's main job is to help people begin to do what they want to do and couldn't do without some help and encouragement. We believe that one index of our effectiveness as a catalytic agent can be found in the health legislation presented to this year's session of the Legislature. Most of these measures—the Physician's Assistant Act and the Emergency Medical Service legislation (to name two)—have been initiated or assisted through the activities of our agency.

In addition, we have promoted the utilization of physician extender personnel through two programs: PAs were located with local physicians in

Camden, Arkadelphia, and Lavaca, and the first formal physician extender training program in Arkansas was organized by the Department of Pediatrics of the University of Arkansas School of Medicine with ARMP funding. This program has trained 10 nurse pediatric practitioners and is being continued with support from the Arkansas Health Systems Foundation.

We have funded a major Consumer Education program to be conducted jointly by the Arkansas State Department of Health and the Cooperative Extension Service. Continuing Education programs funded include statewide programs for dietitians and food service supervisors (UAMC) and Nursing Home Personnel (Arkansas League for Nursing). We have promoted the Area Health Education Center concept in numerous conferences and meetings and by funding developmental programs in Fort Smith, Batesville, Jonesboro and Fayetteville.

Through our Developmental Fund, which provides for small awards not requiring review in Washington, we have funded the following:

A pediatric oncology consultation program; first aid kits for all State Police vehicles; a screening program for the Little Rock Model Cities project; partial support for six indigent clinics (including physician support from the 810 Station Hospital, a USAR unit in Little Rock); a blood-lipid service to Arkansas physicians coordinated by Dr. Manford Morris of the University of Arkansas Medical Center; a digestive disease training station through co-operation between St. Vincent Infirmary and the UAMC; a survey of hospital electrical hazards by Dr. Neal Schmitt of the University of Arkansas College of Engineering; and, finally, a symposium and workshop to introduce health professionals to the various approaches to the problems of quality control in the provision of medical and health care.

#### **Medical Education Foundation for Arkansas**

**Robert Watson, M.D., President**

The Medical Education Foundation for Arkansas was founded in 1962, for the broad purpose of supporting any worthy means of bettering medical education in this State. It was financed by a \$5.00 annual assessment from Society dues paid by each member of the Arkansas Medical Society. Supplemental income is

received in the form of memorial donations and investment dividend income.

Since 1962, \$3,474.00 was contributed to the Dr. Fount Richardson Memorial Microscopic Fund at the School of Medicine, and \$50,324.67 has been contributed during the past eight years to be matched 9 to 1 with Federal funds to provide a student loan fund for needy medical students. Presently, 61 percent of the medical students receive some manner of supplemental financial support from the varied loan funds available at the Medical School.

From its beginning, it has been the policy of the Board of Directors of the Medical Education Foundation for Arkansas that we would each year "spend a little and save a little," hoping that, through prudent management, our invested funds would, in time, have an annual dividend income such that the Medical Education Foundation could be a self-supporting venture and no longer need financial supplements from the State Society.

Presently, toward this end, we have \$30,000.00 invested in government pledged securities that, during the calendar year 1972, paid \$1,962.08 in interest.

After a 1972 contribution of \$5,000.00 provided to the Medical School for 9 to 1 matching student loan funds, as of January 23, 1973, the cash on hand bank balance was \$5,538.02.

It is the Board's request that we be permitted to continue receiving annual State Society support toward eventually becoming an independent program, with sufficient flexibility as to be available for any worthy cause in bettering the medical education needs in Arkansas.

#### **Report from the School of Medicine Winston K. Shorey, M.D., Dean**

##### **Student Assistance**

##### **General**

The report of the School of Medicine this year very appropriately is focused upon financial assistance to needy medical students because: 1) The President of AMS, Dr. Robert Watson, has been a long time champion and active personal provider for needy medical students; 2) changes are occurring in federal programs that will have significant effects upon our student assistance program, and 3) it is an opportune time for the Arkansas Medical Society to review and evaluate its role in student assistance.

World War II is the benchmark for many changes in medical education, and among these is the change in mechanisms for financing a medical education. Prior to WW II very few medical students were married. Since WW II the majority of medical students are married prior to graduation. Financial assistance no longer can be thought of in terms of minimal subsistence for a single individual requiring little more than a bed, desk, food, a few clothes, occasional laundry, and school expenses. More frequently, the budget now under consideration is that of a family unit.

Other factors that have produced a steadily increasing student assistance program include: 1) Steadily increasing costs of medical education and living; 2) a philosophy that the opportunity for a medical education should be dependent upon capability rather than affluence; 3) a steadily increasing number of medical students, and 4) an attempt to influence the future supply of certain categories of physicians through financial assistance, i.e., rural practice loans.

Effective utilization of funds available for student assistance requires that all programs be directed by a single individual. This individual requires all applications for assistance, reviews each student's budget and resources, and utilizes the most appropriate funds for the specific student. This responsibility rests with an Assistant Dean. During the current year, 68.2% of the students enrolled in the Medical School receive some form of financial assistance.

### **Specific Assistance Programs**

The Arkansas Medical Society has made a significant contribution to the student assistance program of the Medical School. Federal funds to provide Health Professions Loans are received on a matching basis, nine federal dollars for each local dollar. Gifts through the Medical Education Foundation for Arkansas and through AMA-ERF have provided local dollars for this loan program. The interest rate on these loans is three percent. They are repaid after the recipient is established in practice. Practice in an area where there is a shortage of physicians can result in forgiveness of the loan.

The federal government also has supported a Health Professions Scholarship program directed toward students with exceptional financial needs. This program has not required local matching

funds. At the time of preparation of this report, it appears that this program will be transferred to the National Health Service Corps and receipt of a scholarship will obligate a medical student to service in the Corps.

The student who receives a Health Professions Scholarship or Health Professions Loan must satisfy quite rigid criteria of need.

Guaranteed bank loans are available to students in need of funds, but who do not meet the rigid criteria of the Health Professions Scholarships and Loans. Guaranteed loans are provided by a local bank with the federal government paying the interest, currently 7 percent, while the student is in school. The student repays the loan a stipulated number of years after graduation.

AMA-ERF loans are available, but carry a relatively high interest rate. These frequently are sought by students requiring funds in the latter years of medical school or during internship and residency training.

Rural Practice Loans/Scholarships are provided through funds appropriated by the General Assembly to increase the number of physicians in rural areas. A long-standing program providing a maximum of \$1,600 annually has been replaced recently by one that provides a student with \$5,000 annually. Forgiveness of indebtedness occurs through practice in a community of less than 6,000 people.

Several other loan funds exist which include the *Medical Centennial Fund* and the *Jeff Banks Fund*. The latest addition to these is the *Robert Wood Johnson Loan and Scholarship Program* which is limited to students from rural counties. In tables that follow within this report these are lumped under *Other Funds*.

### **Student Expense**

Fixed educational costs of tuition, fees, books, and equipment make up one-third of the total of a student's expense budget. The remainder of his budget includes room and board, clothing, transportation and other personal allowances for laundry, entertainment, health insurance, etc. These costs are determined by the cost of living index of the Little Rock area. The expense budget of a first and second year single student averages approximately \$3,200. This can be reduced if a student lives at home. Few live at

home and students given a choice prefer to live on campus because of the close proximity to the library and laboratories of the school. The academic year of first and second year students is nine and seven months respectively. The expense budget of junior and senior students runs considerably higher. Our latest figure for a single student is \$4,600 for a junior student and \$5,200 for a senior. The junior year program is twelve months and the senior year elective program is ten to twelve months. The expense budgets of married students vary considerably. The number of children in a family influence expense. Sixty-six percent of the school's enrollment in 1971-72 were married. The expense budget of married students runs from a low of \$4,600 to a high of \$7,200.

### Statistics

The following tables include only loans and scholarships that are provided students on the basis of need. Not included are certain scholarships which require a high level of academic achievement for eligibility.

### The Future

Medical student enrollment at the School of Medicine increases each year, costs increase each year, and it can be anticipated that the need for student assistance will continue to increase annually.

Sources of funds for student assistance change from time to time, and the current year is one of great uncertainty relative to future federal funds. It appears at the time this report is being prepared that no new Health Professions Scholarships will be awarded. Students now receiving this type of support will continue until they graduate. The Health Professions Loan Program, the program supported by members of AMS, is expected to continue. On the other hand, DHEW has considered replacing it with a different type of loan program.

In order to maintain a viable Health Professions Loan Program, it has been essential for the Medical School to have matching funds on hand in advance of availability of federal funds. Currently, we have on hand \$7,000 from MEFFA and AMA-ERF, or somewhat less than half the amount needed for matching funds for one year.

### Total Students Assisted

	1	2	3	4	Total	Per Cent of Total Enrollment
1970-71	48	44	47	55	194	46.6%
1971-72	62	60	54	50	226	54.6%
1972-73	72	70	65	56	295	68.2%

### Sources Of Funds

	Health Professions Loans	Health Professions Scholarships	Guaranteed Bank Loans	AMA-ERF	Rural Practice	Other Funds	Total
1970-71	\$111,335	\$77,500	\$167,400	\$25,500	\$ 11,200	\$42,480	\$435,415
1971-72	\$219,323	\$71,525	\$181,999	\$18,000	\$ 10,000	\$33,750	\$544,597
1972-73	\$182,505	\$92,395	\$163,500	\$30,250	\$135,500	\$87,120	\$691,270



# *House of Delegates Business Affairs*

The following Constitutional amendments are brought to the attention of individual members and county medical societies. The items printed here represent those received in time for publication in advance of the meeting. They will be referred to reference committees. Open hearings by the reference committees are to be held on Sunday afternoon, April 1st, immediately following the session of the House of Delegates. All members of the Society are urged to participate in the open hearings of the reference committees. The reference committees want expressions of opinion from the membership.

## **Constitutional Amendments**

The following proposed amendments to the Constitution and By-Laws were approved by the House of Delegates during the 1972 meeting. They will be presented to the House of Delegates for final vote at the meeting on Sunday, April 1st.

I. Chapter VIII, By-Laws, Section 1(a), delete Committee #14 "Committee on Continuing Education".

II. Chapter VIII, Section 15, delete:

"The Committee on Continuing Education shall consist of ten members, one from each councilor district. The Committee shall exercise leadership and responsibility in continuing review of the system of graduate medical education. It shall foster continuous efforts to increase excellence in the system of graduate education to serve the cause of medicine and to assure the public of continuing improvement in the graduate training of physicians in practice."

III. Chapter VIII, Section 6, delete:

"The Committee on Medical Education shall serve this State for the Committee on Medical Education of the American Medical Association, and shall have referred to it all questions pertaining to medical education. It shall maintain close relations with the officials and faculty of the University of Arkansas School of Medicine and the Arkansas Academy of General Practice, rendering at all times such assistance as it can in maintaining that institution as a Class A Medical School." and substitute:

"The Committee on Medical Education shall be responsible for consideration of all questions

pertaining to medical education. It shall maintain close relations with the officials and faculty of the University of Arkansas School of Medicine, the Arkansas Academy of Family Practice, and other groups interested in maintaining and improving medical education in our State institutions. It shall foster continuous efforts to increase excellence in the system of postgraduate education to serve the cause of medicine and to assure the public of continuing improvement in the postgraduate training of physicians in practice. The committee shall consist of ten members, one from each councilor district."

IV. Article 4, Section 2, delete:

"Only such person is eligible for active membership in a component society as (1) possesses the degree of Doctor of Medicine, issued by a medical school which at the time such degree was conferred was approved by the Council on Medical Education and Hospitals of the American Medical Association, and (2) holds an unrevoked license to practice medicine and surgery issued by the Board of Medical Examiners which consists of members recommended by this Society." and substitute:

"Only such person is eligible for active membership in a component society as possesses the degree Doctor of Medicine and holds an unrevoked license to practice medicine and surgery by the Board of Medical Examiners which consists of members recommended by this Society."

The Constitutional Revision Committee submits the following proposed Constitutional amendments in accordance with the recommendation of the House of Delegates at the 1972 Annual Session:

I. Delete Section 2 of Chapter VII (page 10) and substitute the following paragraphs:

1. Each councilor shall be organizer, peace-maker and censor for his district. The two councilors in each district shall be designated 'senior' or 'junior' on the basis of length of tenure.
2. A meeting of the members in each councilor district shall be called by the councilor at least once each year within two months of the Annual Session for the purpose of organizing component socie-

ties where none exist, for inquiring into the condition of the profession, and for informing, improving, and increasing the knowledge and zeal of the component societies and their members.

3. The councilors shall jointly prepare and submit to the Council prior to the Annual Session a written report of their work and of the condition of the profession within their district.
4. The necessary traveling expenses incurred by each councilor in the line of the duties herein imposed may be allowed on submission of a properly itemized statement."

II. Under Section 3, Chapter VI, add a second paragraph:

"The vice-presidents may be assigned by the President of the Society as ex-officio members of certain committees of the Society. The vice-presidents' responsibilities will be to stimulate, to guide, to maintain liaison, and to otherwise assist the assigned committees and their respective chairman in the performance of their activities. In no instance will the Vice-President usurp or supplant the committee chairman in his responsibilities. The Vice-President shall not have a vote in the affairs of the committees to which he is assigned under provisions of this section."

III. Amend Article III, Component Societies, to read:

"Component societies shall consist of those county medical societies which hold charters from this society; provided, however, that there may be a chartered society known as the 'Student, Intern, and Resident Society' as provided in the by-laws."

Amend Article IV, Section 2: Active Membership. Change the last sentence in this paragraph to read:

"The eligibility requirements set forth in the preceding sentences are not to apply, however, to members in good standing in any component society at the time of the adoption of this Section (Adopted, House of Delegates, 1937 Annual Session) nor to the members of the specially chartered 'Student, Intern, and Resident Society'."

Amend Article V, House of Delegates, by adding at the end of the paragraph: "and (4) one delegate from the 'Student, Intern, and Resident Society'".

Delete Section 6, Chapter 1 of By-Laws (Affiliate membership for Interns and Residents)

New Section 6, Chapter 1 of By-Laws: "Special membership for Students, Interns and Residents

1. An annual special membership shall be granted to bona-fide students of medicine at the University of Arkansas School of Medicine and to Interns and Residents within the State of Arkansas who are physicians, provided that they are fully or partially excused from the payment of county society dues, not to exceed ten percent of the dues charged active members of the Society, and provided that the request for exemption is transmitted through a component society of the Arkansas Medical Society. The requirement for active membership prior to exemption shall be waived for such special members.
2. The special members resulting from this section will comprise a single component group of the State Society similar to a county society, shall have privileges of speech, may serve on committees, will receive the Journal of the Arkansas Medical Society and shall be entitled to one voting representative in the House of Delegates."



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Vol. 69 No. 11

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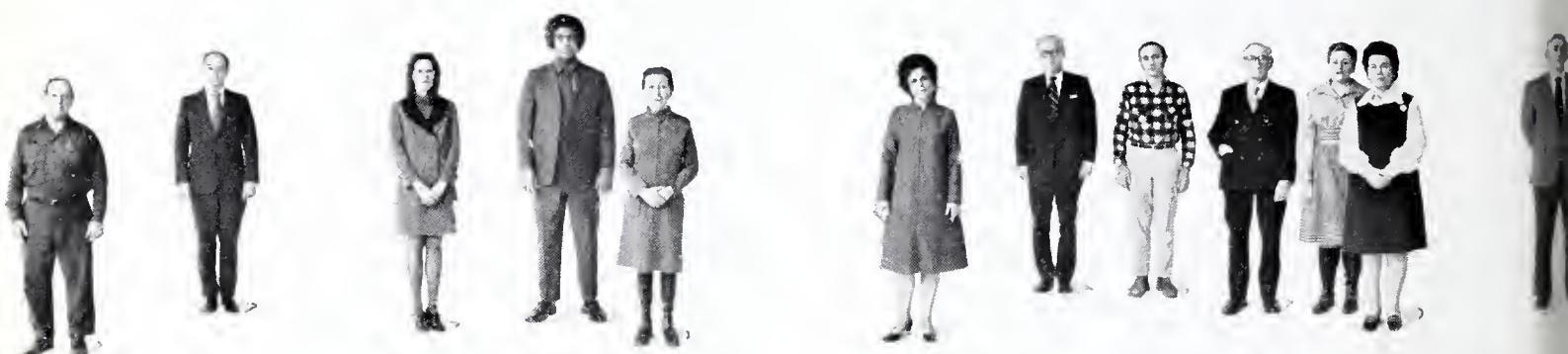
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## The Physician and Water Fluoridation in Arkansas

Ira L. Shannan, D.M.D., M.S.D.\* and William B. Wescott, D.M.D., M.S.\*\*

The dentist has long been recognized as a prime advocate of water fluoridation. That this aspect of community preventive health has been left largely to him is understandable, since it has been well established over the years that approximately 1.00 part per million (ppm) fluoride in drinking water brings about a truly remarkable decrease in dental decay. Evidence has now accumulated that fluoride is also highly important in maintaining bone density. Therefore, the physician as well as the dentist should assume a vital interest in assuring that his patient population is ingesting fluoride at an optimal level.

Over two years ago, a survey in the State of Arkansas<sup>1</sup> (111 towns) showed that only three water supplies, all with added fluoride, contained as much as the generally recommended 1.00 ppm. The mean water fluoride for all sites was 0.33 ppm (S.D.=0.31), with a range extending from 0.04 ppm to 1.10 ppm. For the 44 towns at that time adding fluoride to the drinking water, the mean was only 0.61 ppm (S.D.=0.28). In seven of the sites the water contained less than 0.20 ppm. The present study reports recent fluoride concentrations for 64 towns in Arkansas designated by the State Department of Health as fluoridating their water supplies.

### Materials and Methods

Triplicate water samples were collected in plastic vials after allowing a tap to run freely for at least 30 seconds. Fluoride concentration was measured by a specific ion electrode.<sup>2</sup> This highly sensitive procedure was performed after diluting the sample with an equal volume of buffer solution to a final volume of at least 20

ml. The electrode was placed in the sample and allowed to stabilize while the sample was stirred magnetically. After stabilization, usually about three minutes, fluoride concentration was read directly from the Ionalizer\* specific ion meter. Processing known fluoride standards at intervals assured consistency of response.

Samples were collected from the following locations:\*\* Altheimer, Arkadelphia, Augusta, Bald Knob, Batesville, Beebe, Benton, Bentonville, Blytheville, Brinkley, Cabot, Camden, Center Hill, Clarksville, Conway, Crossett, Dermott, DeWitt, Dumas, Eudora, Forrest City, Hamburg, Harrison, Heber Springs, Helena, Jacksonville, Jonesboro, Judsonia, Lake Village, Lamar, Lewisville, Lonoke, Malvern, Mammoth Spring, Marianna, McCrory, McGehee, Monticello, Morriston, Mountain Home, Newport, North Little Rock, Osceola, Paragould, Paris, Patterson, Pine Bluff, Pocahontas, Portland, Russellville, Salem, Searcy, Sheridan, Springdale, Star City, Stuttgart, Trumann, Tyronza, Walnut Ridge, Warren, West Helena, West Memphis, Wynne, and Yellville.

Two water samples from each site were analyzed for fluoride concentration and the mean value taken as the true level. The third sample was reserved for analysis if significant disagreement existed between the results for the first two vials.

### Results

The mean fluoride concentration in the 64 fluoridating towns was 0.61 ppm (S.D.=0.37). The frequency distribution of fluoride values for all sites is outlined in Figure 1. The range of individual values extended from 0.02 ppm to 1.46 ppm. Seven supplies (10.9%) contained

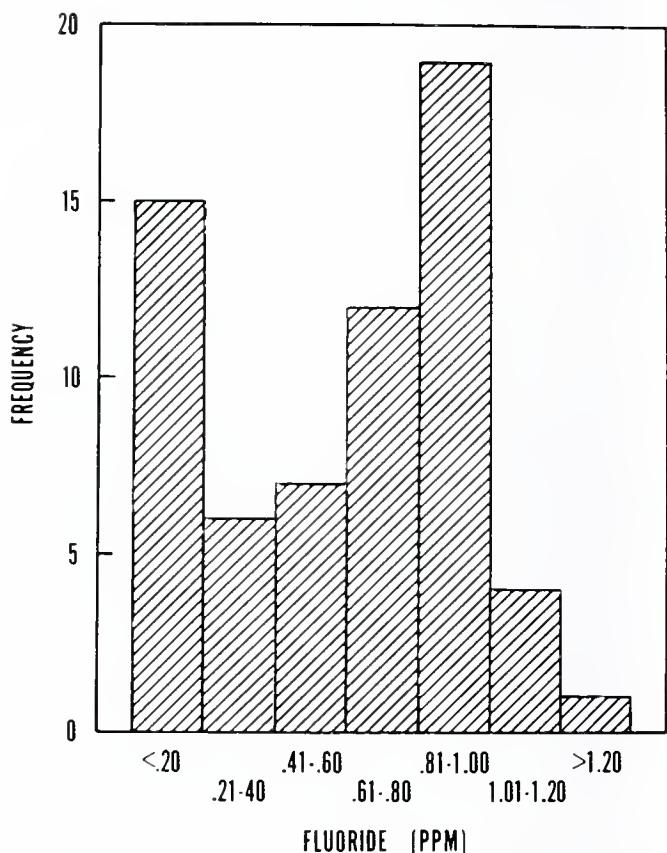
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\*\*University of Texas Dental Branch and Graduate School of Biomedical Sciences, Houston, Texas.

\*Orion Research, Inc., Cambridge, Massachusetts

\*\*Individual site concentration data available from the authors

**FLUORIDE LEVEL IN DRINKING WATER OF 64 ARKANSAS  
TOWNS SAID TO BE FLUORIDATING**



0.10 ppm or less; 15 (23.4%) contained 0.20 ppm or less. Only 29 towns (45.3%) fell within the recommended<sup>3-5</sup> 0.70-1.20 ppm range. One site contained a level exceeding 1.20 ppm. The 1.46 ppm in this particular supply, while higher than generally recommended, is probably not sufficient to produce undesirable mottling of the teeth,<sup>6</sup> the first detectable sign of an oversupply of fluoride. The significant problem pointed out by the current survey is that unacceptably low levels of fluoride occur in a majority (53.1%) of towns that theoretically are adding fluoride to their water at an optimal level.

#### Discussion

More than a century ago, Berzelius<sup>8</sup> in water samples from a variety of sources reported fluoride levels ranging from negligible amounts to as high as 3.3 ppm.<sup>9</sup> In 1931 a report by Churchill<sup>7</sup> established that a high level of fluoride was the factor producing severely mottled enamel in children in Bauxite, Arkansas. Armed with the knowledge that in certain areas fluoride in the drinking water appeared highly beneficial in preventing dental decay, researchers undertook the monumental task of correlating caries activity and water fluoride level in a large number of epidemiologic studies. This work culmi-

nated in the well-known Newburgh-Kingston fluoridation study. This classic long-term public health endeavor and dozens of similar studies have demonstrated clearly that great dental benefit results from water fluoridation. There has been a complete freedom from undesirable side effects. So irrefutably established are the dental benefits and safety of water fluoridation that several states have enacted legislation requiring fluoridation of deficient waters. Such laws are in effect in Connecticut, Minnesota, Illinois, Delaware, Michigan, South Dakota, Ohio, Kentucky, and Puerto Rico. Ireland is the only country with a legal requirement for fluoridation of the water at this time.

While the physician appreciates the preventive dental aspects of fluoride ingestion, he is naturally more interested in systemic effects that may benefit his patients. Early systemic studies dealt primarily with dangers associated with fluoride ingestion when intake levels were extremely high. Two studies<sup>10-11</sup> involving workers employed in crushing and refining cryolite (a mineral containing the combined fluoride salts of sodium and aluminum) reported bizarre and crippling skeletal changes associated with remarkably high levels of fluoride intake. Since these early reports of skeletal fluorosis also described marked increases in bone density, it was suggested at that time that fluoride administration might be beneficial in rarefying bone disorders.

Large doses of fluoride have been administered in attempts to combat systemic bone disease. Jowsey and Kelly<sup>12</sup> reversed idiopathic osteoporosis in young patients by administering fluoride. Other investigators observed beneficial effects on senile osteoporosis, on corticoid-induced osteoporosis and on Paget's disease.<sup>13-21</sup> Shambbaugh and his associates<sup>22-25</sup> found that sodium fluoride administration retards or arrests cochlear osteoporosis, and Lukomsky<sup>26</sup> reported that fluoride dosage induced recalcification in alveolar bone rarefied by periodontal disease.

Doses of 100 mg sodium fluoride daily have been utilized in relieving intractable bone pain from metastatic osteoblastic prostatic malignancy.<sup>27-29</sup> Other workers<sup>30-32</sup> arrested the progression of bone lesions and relieved the pain associated with multiple myeloma. Others,<sup>33-36</sup> however, have reported a lack of success in the therapeutic use of fluorides. One such study in-

volved 150 multiple myeloma patients in whom sodium fluoride did not induce any favorable influence on either the clinical course of the disease or survival time.<sup>37</sup>

Prophylactic administration of fluoride offers great promise in preventing skeletal disorders. That fluoride ingestion over a long period of time will reduce the occurrence of osteoporosis was first pointed out by Leone, et al.<sup>38-39</sup> Residents of two adjacent Texas towns, Bartlett and Cameron, with water supplies naturally containing 8.0 and 0.4 ppm fluoride, respectively, and of Farmingham, Massachusetts, with only 0.04 ppm fluoride, were compared radiographically under carefully controlled conditions. A significantly larger number of persons living in the low fluoride area showed decreased bone density (osteoporosis) than did those residing in the high fluoride area. This finding was later confirmed and extended in a study<sup>40</sup> of 300 residents of southwestern North Dakota where the drinking water contained 4.0-5.8 ppm fluoride, and of 715 persons who resided in a low fluoride area, 0.15-0.30 ppm, in northeastern North Dakota. Radiographic evidence of osteoporosis, reduced bone density and collapsed vertebrae was substantially higher in the low fluoride area. This latter study<sup>40</sup> also pointed out that significantly less calcification of the aorta, particularly in men, occurred in the high fluoride areas of North Dakota.

Leipzig and coworkers<sup>41</sup> studied the aortas of rabbits with induced atherosclerosis and found that feeding sodium fluoride ameliorated the atherosclerosis. They suggested that sodium fluoride dosage induced a decrease in extracellular calcium ion concentration with a consequent stimulation of the parathyroids. Zipkin, et al<sup>42</sup> reported inhibition of calcium uptake by incubated aorta when fluoride levels were adjusted to approximate those of human plasma. Thus, evidence has accumulated that fluoride ingestion may indeed retard aortic calcification and prevent the onset of atherosclerosis.

Alffram, et al<sup>43</sup> studied two groups of Swedish women, 45 to 72 years of age, living in two cities, one with natural water fluoride of 0.2 to 0.4 ppm and the other with 4.0 to 6.8 ppm. Bone mineral mass, determined by radiographic measurement of relative cortical thickness and attenuation of a photon-beam passing through the femur laterally in the epicondylar area, was shown to be di-

rectly associated with high fluoride levels in the community water.

The incidence of hip and wrist fractures in persons over 40 years of age has been studied in two New York cities. Drinking water in Kingston contains negligible fluoride (about 0.05 ppm); the other city, Newburgh, has been artificially fluoridated at 1.0 ppm for many years. Korns<sup>44</sup> found no significant differences in fracture rates, incidence of osteoporosis, collapsed vertebrae, or calcification of the aorta between individuals residing at least 22 years in each city. Similar results were obtained with residents in three cities in Sweden: Malmo,<sup>45</sup> with 0.2 to 0.4 ppm fluoride, Gothenburg,<sup>46</sup> with less than 0.1 ppm fluoride, and Eskilstuna,<sup>42</sup> with 0.8 to 1.2 ppm fluoride.

Thus the question arises whether or not the approximately 1.0 ppm fluoride required for caries reduction is sufficient to reduce the incidence of osteoporosis. In concluding his report on the failure of 1.0 ppm fluoride to reduce osteoporosis in the Newburgh-Kingston study, Korns<sup>44</sup> stated, "A more meaningful research design is needed to assess whether a community water level of 1.0 ppm fluoride has any effect on the prevalence and severity of osteoporosis".

Since this problem revolved primarily around the quantity of fluoride in drinking water in relation to fluoride in bone, Geever, et al<sup>47</sup> measured skeletal fluoride levels in autopsy material from Grand Rapids, Michigan (1.0 ppm fluoride) and from Albany and New York City, New York (about 0.1 ppm fluoride). The bones from Grand Rapids contained a greater quantity of fluoride than did the controls, demonstrating that fluoride acquired by mature bones remains at a plateau level. No microscopic differences were observed. There was no evidence that prolonged (20 years) consumption of fluoridated water had any adverse skeletal effects. The quantity of fluoride in the Grand Rapids bone specimens, however, was not sufficient to exert a beneficial effect on patients with osteoporosis.

It thus appears that considerably more than 1.0 ppm fluoride in water is necessary to reduce osteoporosis. It is known that long-term ingestion of water containing 8.0 ppm fluoride significantly prevents osteoporosis and produces no deleterious bone changes of any type.<sup>38</sup> As would be anticipated, dental fluorosis becomes a troublesome complication at 8.0 ppm.<sup>48</sup>

Amounts of fluoride around 4.0 ppm have been found highly effective in preventing osteoporosis<sup>40</sup> but unequivocal conclusions as to the preventive effects of fluoride concentrations between 1.0 and 4.0 ppm cannot be made.

The issue to be settled by further study is therefore the selection of a minimal fluoride concentration that will provide prophylactic skeletal benefit and also be acceptable from the dental point of view. Should the problem prove exceedingly difficult, it may be appropriate to fluoridate drinking water at the level optimal in the dental sense and then to prescribe supplements at appropriate times to assist in preventing osteoporosis.

Despite the fact that it is not yet possible to state precisely how much fluoride water supplies should contain to provide both maximal dental and skeletal benefits, it seems unquestionable that physicians must become actively involved with community water fluoridation issues in the interest of their patients. Aside from encouraging fluoridation of deficient water supplies, the physician must insist that fluoridation, where approved, is practiced with expert precision. The significant statistic in this report is that of the 64 towns in Arkansas that are purportedly fluoridating, only 29 sites (45.3%) actually provide water with optimal fluoride concentration of 0.7 to 1.2 ppm. The mean water fluoride concentration of 0.61 ppm (S.D.=0.37) found in the present study is identical to that of 0.61 ppm (S.D.=0.28) found in a study of 44 purportedly fluoridating towns more than two years ago.<sup>1</sup> In the light of these data it is realistic to assume that this is indeed the level at which fluoridation is being practiced in Arkansas. The situation in Arkansas is by no means unique. The Bureau of Water Hygiene of the Environmental Protection Agency reported<sup>49</sup> that in an adjacent state, 50% of the fluoridating towns fell beneath the recommended range. We have also found an identical situation in yet another state bordering Arkansas. It is not the intent of this paper to criticize fluoridation procedures of specific locations but rather to encourage physicians to assume their share of responsibility in correcting this existing deficit.

### Summary

A fluoride survey was conducted in 64 towns in Arkansas reported to be adding fluoride to the communal water supply. The mean fluoride

concentration for the 64 sites was 0.61 ppm (S.D.=0.37) and the range extended from 0.02 to 1.46 ppm. The water supplies of 15 towns (23.4%) contained 0.20 ppm or less fluoride. Only 29 towns (45.3%) fell within the recommended range of from 0.7 to 1.2 ppm.

Water fluoridation, along with other forms of fluoride ingestion, is important in preventing dental decay and can also serve a prophylactic function in preventing skeletal disorders. It is therefore the responsibility of both dentist and physician to assure that fluoridation is practiced in areas deficient in this element and that quality control measures are instituted to insure that fluoride addition to the water supply, if approved, is accomplished properly.

### REFERENCES

- Shannon, I. L. Fluoride content of drinking water in Arkansas. *Ark. Dent. J.* 41:11, 1970.
- Frant, M. S., and Ross, J. W. Electrode for sensing fluoride ion activity in solution. *Science* 154:1553, 1966.
- Galagan, D. J. Climate and controlled fluoridation. *J. Amer. Dent. Assoc.* 47:159, 1953.
- Galagan, D. J., and Vermillion, J. R. Determining optimum fluoride concentrations. *Public Health Rep.* 72:491, 1957.
- U. S. Public Health Service. *Public Health Service drinking water standards: Revised 1962*. Washington, Government Printing Office, 1962, p. 8.
- Dean, H. T. Fluorides and dental health. *Amer. Assoc. Adv. Science* 19:26, 1942.
- Churchill, H. V. Occurrence of fluorides in some waters in the United States. *Industrial and Engineering Chem.* 23:996, 1931.
- Berzelius, J. Correspondenz. *Nenes allgem. J. Chem.* 6:590, 1806.
- Volker, J. Introduction to A Symposium on Recent Clinical Advances in the Use of Fluorides for Controlling Caries. *Acad. Med. N. J. Bull.* 14:206, 1968.
- Moller, P. F., and Gudjonsson, S. V. Massive fluorosis of bones and ligaments. *Acta Radiol.* 13:269, 1932.
- Rohholm, K. Fluorine intoxication. A clinical-hygienic study. London, H. K. Lewis Co., 1937.
- Jowsey, J., and Kelly, P. J. Effect of fluoride treatment in a patient with osteoporosis. *Mayo Clin. Proc.* 43:435, 1968.
- Rich, C., and Ensinck, J. Effect of sodium fluoride on calcium metabolism of human beings. *Nature* 191:184, 1961.
- Purves, M. J. Some effects of administering sodium fluoride to patients with Paget's disease. *Lancet* 2:1188, 1962.
- Bernstein, D. S., Guri, C., Cohen, P., Collins, J. J., and Tamvakopolous, S. The use of sodium fluoride in metabolic bone disease. *J. Clin. Invest.* 42:916, 1963.
- Rich, C., Ensinck, J., and Ivanovich, P. The effects of sodium fluoride on calcium metabolism of subjects

with metabolic bone diseases. *J. Clin. Invest.* 43:545, 1964.

17. Rich, C., and Ivanovich, P. Response to sodium fluoride in severe primary osteoporosis. *Ann. Intern. Med.* 63:1069, 1965.
18. Cass, R. M., Croft, J. D., Perkins, P., Nye, W., Waterhouse, C., and Terry, R. New bone formation in osteoporosis following treatment with sodium fluoride. *Arch. Intern. Med.* 118:111, 1966.
19. Bernstein, D. S., and Cohen, P. Use of sodium fluoride in the Treatment of Osteoporosis. *J. Clin. Endocrinol. Metab.* 27:197, 1967.
20. Linke, B. P., Bolinger, R. E., and Meek, J. C. Acute effect of fluoride on calcium dynamics in osteoporosis. *J. Clin. Endocrinol. Metab.* 27:828, 1967.
21. Theibaud, M. Traitement des osteopathies atrophiques par le fluorure de sodium. *Schweiz. Med. Wschr.* 100:213, 1970.
22. Petrovic, A., and Shambaugh, G. Promotion of bone calcification by sodium fluoride. *Arch. Otolaryng.* 83:104, 1966.
23. Linck, G., Petrovic, A., and Shambough, G. Fluoride and calcium content of bone in otosclerotic patients. *Arch. Otolaryng.* 86:78, 1967.
24. Shambaugh, G., and Petrovic, A. Effects of sodium fluoride on bone. *J. Amer. Med. Assn.* 204:969, 1968.
25. Schambaugh, G. E., and Sundar, V. S. S. Experiments and experiences with sodium fluoride for inactivation of the otosclerotic lesion. *Laryngoscope* 79:1754, 1969.
26. Lubomsky, E. H. Fluorine therapy for exposed dentin and alveolar atrophy. *J. Dent. Res.* 20:649, 1941.
27. Scott, W. P. Fluoride treatment of bone pain in cancer of the prostate. *J. Amer. Med. Assn.* 202:212, 1967.
28. Scott, W. P. Fluoride therapy for pain in malignant bone disease. *Radiol.* 90:588, 1968.
29. Scott, W. P. Fluoride therapy in prostatic carcinoma metastatic to bone. *No. Carolina Med. J.* 29:161, 1968.
30. Neer, R. M., Zipkin, I., Carbone, P. P., and Rosenberg, L. E. Effect of sodium fluoride therapy on calcium metabolism in multiple myeloma. *J. Clin. Endocrinol. Metab.* 26:1059, 1966.
31. Cohen, P., and Gardner, F. H. Induction of subacute skeletal fluorosis in a case of multiple myeloma. *N. Eng. J. Med.* 271:1129, 1964.
32. Cohen, P., Nichols, G. L., and Banks, H. H. Fluoride treatment of bone rarefaction in multiple myeloma and osteoporosis. *Clin. Orthop. Res.* 64:221, 1969.
33. Rose, G. A. A study of the treatment of osteoporosis with fluoride therapy and high calcium intake. *Proc. Roy. Soc. Med.* 58:436, 1965.
34. Deuxchaisnes, C. N., and Krane, S. M. Paget's disease of bone: Clinical and metabolic observations. *Medicine* 43:233, 1964.
35. Higgins, B. A., Nassim, J. R., Alexander, R., and Hilb, A. Effect of sodium fluoride on calcium, phosphorus, and nitrogen balance in patients with Paget's disease. *Brit. Med. J.* 1:1159, 1965.
36. Milic, M., and Jowsey, J. Effect of fluoride on disuse osteoporosis in the cat. *J. Bone Joint Surg.* 50-A:701, 1968.
37. Harley, J. B., Schilling, A., and Glidewell, O. Ineffectiveness of fluoride therapy in multiple myeloma. *N. Eng. J. Med.* 286:1283, 1972.
38. Leone, N. C., Stevenson, C. A., Hilbush, T. G., and Sorman, M. C. A roentgenologic study of a human population exposed to a high-fluoride domestic water: a ten year study. *Amer. J. Roentgen.* 74:874, 1955.
39. Leone, N. C., Stevenson, C. A., Besse, B., Hawes, L. F., and Dawbor, T. R. The effect of the absorption of fluoride. II. A radiological investigation of 546 human residents of an area in which the drinking water contained only a minute trace of fluoride. *Arch. Industrial Health* 21:326, 1960.
40. Bernstein, D. S., Sadowsky, N., Hegsted, D. M., Gni, C. D., and Stare, F. J. Prevalence of osteoporosis in high and low-fluoride areas in North Dakota. *J. Amer. Med. Assn.* 198:85, 1966.
41. Leipzig, L. J., McCann, D. S., and Boyle, A. J. The effect of oral sodium fluoride on aortic phosphate in experimental atherosclerosis. *Life Sci.* 6:999, 1967.
42. Zipkin, I., Zucas, S. M., Lavender, D. R., Fullmer, H. M., Schifflman, E., and Corcoran, B. A. Fluoride and calcification of the rat aorta. *Calc. Tiss. Res.* 6:173, 1970.
43. Alffram, P. A., Hernborg, J., and Nilsson, B. E. R. The influence of a high fluoride water on the bone mineral mass in man. *Acta Orthop. Scand.* 40:137, 1969.
44. Korns, R. F. Relationship of water fluoridation to bone density in two New York towns. *Pub. Health Rep.* 81:815, 1969.
45. Martensson, L. Ar svensk sjukhusplanering andamalsenlig? Statistiska undersökningar rörande columfrakturens frekvens. *Sv. Lak-Tidn.* 59:3185, 1962.
46. Alffram, P. A. An epidemiologic study of cervical and trochanteric fractures of the femur in an urban population. *Acta Orthop. Scand., Suppl.* 65, 1964.
47. Geever, E. F., McCann, H. G., McClure, F. J., Lee, W. A., and Schiffmann, E. Fluoridated water, skeletal structure, and chemistry. *HSMHA Health Rep.* 86:820, 1971.
48. Zimmermann, E. R., Leone, N. C., Arnold, F. A., Jr. Oral aspects of excessive fluorides in a water supply. *J. Amer. Dent. Assn.* 50:272, 1955.
49. Evaluation of the Tennessee Water Supply Program. Bureau of Water Hygiene, Environmental Protection Agency, Region IV, January, 1971.



# Eulogy

(Theodore C. Panos, M.D. 1915-1970)

William G. Thurman, M.D.\*

It is unusually difficult to be the first of anything and that is particularly true in reference to a lecture series devoted to Ted Panos. I am sure that most of you know some of the things I have to say about Ted but I think it is important for all of us to recognize the extent of his contributions. I do not think many of us knew him to the extent that we might have liked, but we do know that Ted was an individual who served pediatrics and medicine in general in many capacities. We have to go back to some diseases that, fortunately, are no longer with us to see where he started his contributions. I am sure that many of you will remember that when he first went to Minnesota, having already been in practice; he went there as a resident in pediatrics at the time when we faced a severe nation-wide polio epidemic. Ted and Clifford Grulée who is now the Dean at the University of Cincinnati School of Medicine did probably what is still the best piece of epidemiologic work in reference to polio. The data base that they were able to establish made it much easier for those who had another 11 years of polio experience before them to do a much better job. We tend to forget because polio is almost gone, but if you were active in those days the contributions of Drs. Panos and Grulée were those that came to be known exceedingly well. I would name this as one of Ted's major accomplishments.

When he decided to leave Minnesota for Galveston he caused one quote that I would like to give you, stated by an individual for whom he worked. Irvine McQuarrie, who is probably one of the most respected names in pediatrics, said, "Never have I had a resident who was not only so sincere and so gentle but also very practical. I do not know what Ted's experience in practice had to do with his practicality but this individual came into a medical school not known for its practicality and immediately turned around a whole opinion of the house-staff on how to approach a disease entity. His gentleness was never outdone by the amount of work that had to be done by one and all and he left us to go to another type of position over the

very strong opposition of the majority of the faculty of the University of Minnesota School of Medicine." This monument to Ted in reference to the years when Ted was a house officer was not earned easily, because Irvine McQuarrie gave words of praise like some of us would give a million dollars. When Ted left to go to Galveston he left with some of the highest words of praise from a man who gave them very, very seldom.

His contributions at Galveston were many. There we first identify him in laboratory research when he developed his interest in the adrenogenital syndrome. Also, at that time we were beginning to define the dose of steroids that was adequate for management of a child with acute leukemia. Ted was one of the people who helped us decide what dose was truly physiologic. I would point out that this was 1955 and from that point on we began to accept a dose that has not been substantially changed yet.

I would be remiss if I did not go on to discuss his role as a member of the American Board of Pediatrics. Ted was for many years a very devoted member of the Board which duty takes a tremendous amount of time. It enabled him to spread his effect in the field of pediatrics to a great many other individuals.

I became very close to Ted since both of us had served for a long period of time as consultants to the U. S. Air Force Surgeon General, in which capacity we visited Air Force installations all over the world trying to do what could be done to make pediatrics or any other component of medical care better. Ted was acting as a consultant at the time of his death and his work for well over 12 years for the Surgeon General has done a great deal to bring more career pediatricians into the Air Force and to improve the level of care that was initially grim. I think that here a major monument exists to a man who slowly but surely, without aggravating the military, began to change the level of health care that was available in the Air Force throughout the world.

I remember very well one time when I, along with Ted, was struggling with an individual in a foreign country and was very surprised to hear

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Ted switch into very fluent Greek that everybody else understood. I had never known until that time how fluent he was. I am sure that most of you that knew him well remember that there are very few people who knew more about classical music than Ted did and how involved he could get with it. If you ever drove with Ted while he was listening to classical music on the radio, you know it was really a ride because you were never quite sure whether he was watching the road or whether he was listening to the music. There were times when I often wondered if we were not going to be listening to a different type of music very soon. I think these facets of a real human being represent the Ted that most of us knew. I would like to *not* remember the many times I lost to him playing poker and I am sure that was true of some of the people sitting in this room. He was an accomplished poker player and regardless of how good you were, you very rarely bluffed Ted's hand and he very rarely lost. I had that experience with him for over 14 years and I can honestly say I never left the table a winner. Ted was an exceedingly good poker player.

The things I have outlined in these few min-

utes really highlight the man as he was known to a great many people in this country. I think it is very easy when you work with an individual on a day to day basis not to know what their contributions are to the world wide state of the art that all of us try to practice. Ted was known internationally as well as nationally. His contributions beginning early with steroids and with polio have lasted and will last. The last person that I talked to before coming here was the ex-Surgeon General of the Air Force who emphasized what I had already known in saying that Ted's persistence in nagging through the years had certainly made a tremendous change in the level of care that has been available to the Air Force dependents in this country and abroad by the pediatricians who have been rotated through those installations. He left his mark with a great many of us. There are many of us who sit where we happen to be in chairs now who owe much of what we are to the man. We owe him a debt of gratitude and I think that those of you who lived and worked with him had a pleasure that many people did not have. Those of us who had that privilege away from here were privileged to enjoy it with you.



#### **Paget's Disease of Breast**

R. Ashikari et al (444 E 68th St, New York 10021)  
*Cancer* 26:680-685 (Sept) 1970

Two hundred and fourteen cases of histologically proved Paget's disease of the breast were seen at Memorial Hospital during the period 1950 through 1968. Ninety-six patients were without palpable masses clinically, and 113 had Paget's disease of the nipple with palpable masses. Two thirds of the patients without palpable masses clinically had noninfiltrating carcinoma, and the majority of them had negative nodes in the axilla; accordingly, they have a good prognosis. Ninety percent of the patients with palpable masses had infiltrating carcinoma, and two thirds had positive nodes in the axilla. According to this study, modified radical mastectomy is the treatment of choice for the patient who does not have a palpable mass. Radical mastectomy should be performed on the patient who has a palpable mass.

#### **Disappointments in the Management of Patients With Malignancy of the Pancreas, Duodenum, and Common Bile Duct**

M. S. Beall, G. Dyer, and H. E. Stephenson, Jr.  
(Univ. of Missouri School of Medicine, Columbia 65201)

*Arch Surg* 101:461-465 (Oct) 1970

Only 8% of the patients with cancers of the pancreas, duodenum and common bile duct admitted over a 14-year period qualified as candidates for curative resection. To date, there is but one five-year survivor among 257 patients. Patients receiving palliative procedures survived longer than those without surgery, and pancreatectoduodenectomy generally afforded patients a longer survival than those undergoing palliative procedures. Among the patients with resectable lesions of the ampulla of Vater there were no postoperative deaths even though all but two were in the seventh decade. To date these patients represent survivals from 0 to 74 months.

# The Atomic Powered Cardiac Pacemaker

G. Doyne Williams, M.D.\*

The recent introduction of the atomic powered cardiac pacemaker to the United States has raised many questions on the part of physicians and potential patients concerning its availability, longevity, and safety from radiation injury. Approval for the sale of the nuclear powered device was obtained from the Atomic Energy Commission by the Medtronic Company of Minneapolis, Minnesota, in 1972. The Atomic Energy Commission required the individual institution contemplating the implantation of such a device to obtain a license for its use entailing approval by the manufacturer, the radiological health division of the concerned state health department, and the radiation safety committee of the institution seeking licensure. Ultimately the Atomic Energy Commission reviewed the approvals of these individual agencies as well as a protocol submitted by the physician and institution seeking licensure and authorized the final issuance of the license by the individual state health department. It was suggested that primary consideration for the initial implantation would be given to those individuals and institutions seeking licensure who had established themselves as investigators interested in problems concerning electrical pacing of the heart by publications and continuing research in the field of cardiac pacing as well as maintaining a large clinical pacemaker service with proven organized patient follow-up. Initially, only a limited number of these pacemakers will be installed in the United States, and it was felt that the greatest volume of clinical and investigative data could be obtained by limiting the implantations to institutions so qualified.

Twenty atomic powered pacemakers have been implanted in the United States of America to date. The first was implanted in Buffalo, New York, by Dr. William Chardack, a pioneer investigator with Medtronic who assisted in the design of the first clinical pacemakers. The second was installed by Dr. Sol Center in Miami, and in November of 1972 the University of Arkansas Medical Center became the third institution in the United States to install an atomic powered device. Since this time, additional institutions in Nashville, Tennessee; Memphis, Tennessee, and Atlanta, Georgia, have been licensed and have installed atomic powered pace-

makers.

The atomic powered pacemaker as supplied by the Medtronic Company of Minneapolis, Minnesota, differs little in physical characteristics from other pacemakers. It is 7 cms in diameter, 2.6 cms thick, and weighs approximately 190 grams. The electrical circuitry is the same demand type R wave inhibited mechanism which Medtronic has provided for several years. In addition, a hysteresis rate mode is provided which allows spontaneous cardiac rates of down to 62 beats per minute to suppress the pulse generator output. However, should the spontaneous rate fall below 62 beats per minute, the pulse generator immediately emits stimuli at a rate of 72 pulses per minute to provide a more physiological recovery from the slow interval.

The power supply for the atomic pacemaker is a plutonium 238 fueled thermal-electric generator designed and built by Society Alcatel of Paris, France (the French equivalent of the American Atomic Energy Commission). The fuel capsule contains approximately 150 mgs of plutonium 238 as a heat source. Electricity is generated in this system by the Seebeck effect. This is basically the principle of the thermocouple in which changing the temperature of two dissimilar metals which have been annealed together produces a potential difference across the two metals. This power supply (by calculation) will last approximately 15 years with sufficient output voltage to operate the pacemaker.

The safety of the atomic pacemaker has been exhaustively tested and would appear to be adequate. The unit has been shot with a 7 mm pistol at close range without damage to the fuel capsule, it has been dropped from an airplane with no damage even to the outer shell, and it has been heated to temperatures which exceed that generated in crematoriums without damage to the fuel capsule. The surface activity of the clinical pacemaker when tested with a scintillation counter is less than that experienced when the scintillation counter is placed near an ordinary luminous dial wristwatch. We can anticipate more surface activity to appear with decay of the nuclear power source. However, calculations would indicate this to be well within safe limits in the 15 year period under consideration.

A limited number of pacemakers can be offered the patients in the state of Arkansas by the

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University of Arkansas Medical Center, provided these patients fall within the limitations imposed by our license. The patients must have a life expectancy of 10 years or greater following the implantation of the pacemaker and must be free of other cardiovascular diseases or disease states which would interfere with the evaluation of the pacemaker function. The patient must be willing to sign an operative permit which emphasizes that this is an experimental device which has not received full clinical investigation at this time, and may give rise to, as yet, unforeseen hazards in the future. The patient has to be willing to return to the Medical Center where the device was implanted for follow-up at three-month intervals. The patient and his next of kin must sign an agreement that if the patient should die while an atomic powered device is implanted within his body, the intact body is to be returned to the implanting institution for removal of the unit by authorized personnel. Our license further specifies that only the individual physician sited in the institutional license may implant such a device and that he can do this only in the licensed institution and could not go to another institution, even in his own state, and implant such a device. Some of these restrictions seemed a bit harsh initially, but when one considers the health hazard potential of a malfunctioning fuel capsule containing 150 mgs of plutonium 238, the precautions seemed thoroughly justified.

Our license further specifies that the electrodes will be of the bipolar epicardial type which are sewn directly to the surface of the heart with a portion of the electrode material protruding down into the myocardium. This is appropriate since this type of electrode has withstood the test of time and if one is implanting a pacemaker with a life expectancy of possibly 15 years one wants the most reliable electrode system available. The multiplicity of problems surrounding the more easily implanted transvenous type of electrodes are familiar to all workers in the pacemaker field.

The precise positioning of the pulse generator itself in the patient's body is left to the discretion of the implanting surgeon. We prefer to place the unit in the left subpectoral region just above the thoracotomy incision used for positioning of the myocardial electrodes. Currently we do not always use a formal left thoracotomy incision for placement of the myocardial electrode. A very

limited left anterior parasternal incision is used (which can be done under local anesthesia) to provide limited access to the anterior surface of the heart on the left side. Two myocardial electrodes can be readily applied to the surface of the heart through this limited incision and the electrode wire then worked up subcutaneously to the left subpectoral pocket. Use of this technique allows implantation of the more reliable myocardial electrodes under local anesthesia in older and more fragile patients who might not be able to tolerate a full left postero-lateral thoracotomy.

The \$5,000.00 cost of the atomic powered pacemaker would appear at first inspection to be a formidable obstacle to its widespread use. However, when one considers that a conventional pacemaker without electrodes of the demand type costs approximately \$850.00 and can be expected to last only 30-36 months, then the atomic pacemaker appears to have a real financial advantage. Should the atomic pacemaker prove to function for 15 years as anticipated, it would replace approximately five conventional battery powered pacemakers and the costs of hospitalization, surgery and inconvenience to the patient required for 15 years of pacing with conventional systems. As yet, no insurance carrier in the United States has approved the purchase of an atomic pacemaker but the state of Tennessee has one insurance carrier who is seriously considering endorsement of the unit due to its apparent financial advantage and others may be forthcoming.

In summary, the University of Arkansas Medical Center is not actively seeking patients for implantation of the atomic powered pacemaker. If individual physicians in the State have patients which they feel represent outstanding candidates for the atomic unit, we would be happy to discuss the individual patient with them and comment on their possible qualifications. Since only 20 units have been implanted in the entire United States throughout the past year, it is apparent that the availability is very limited and the requirements must be upheld. Atomic powered pacing may well prove to be the ultimate technique; however, the results regarding longevity, safety of the power supply, and economic feasibility are not yet in, and only careful clinical investigation coupled with continued engineering improvements in the circuitry and power supply will provide the answer.

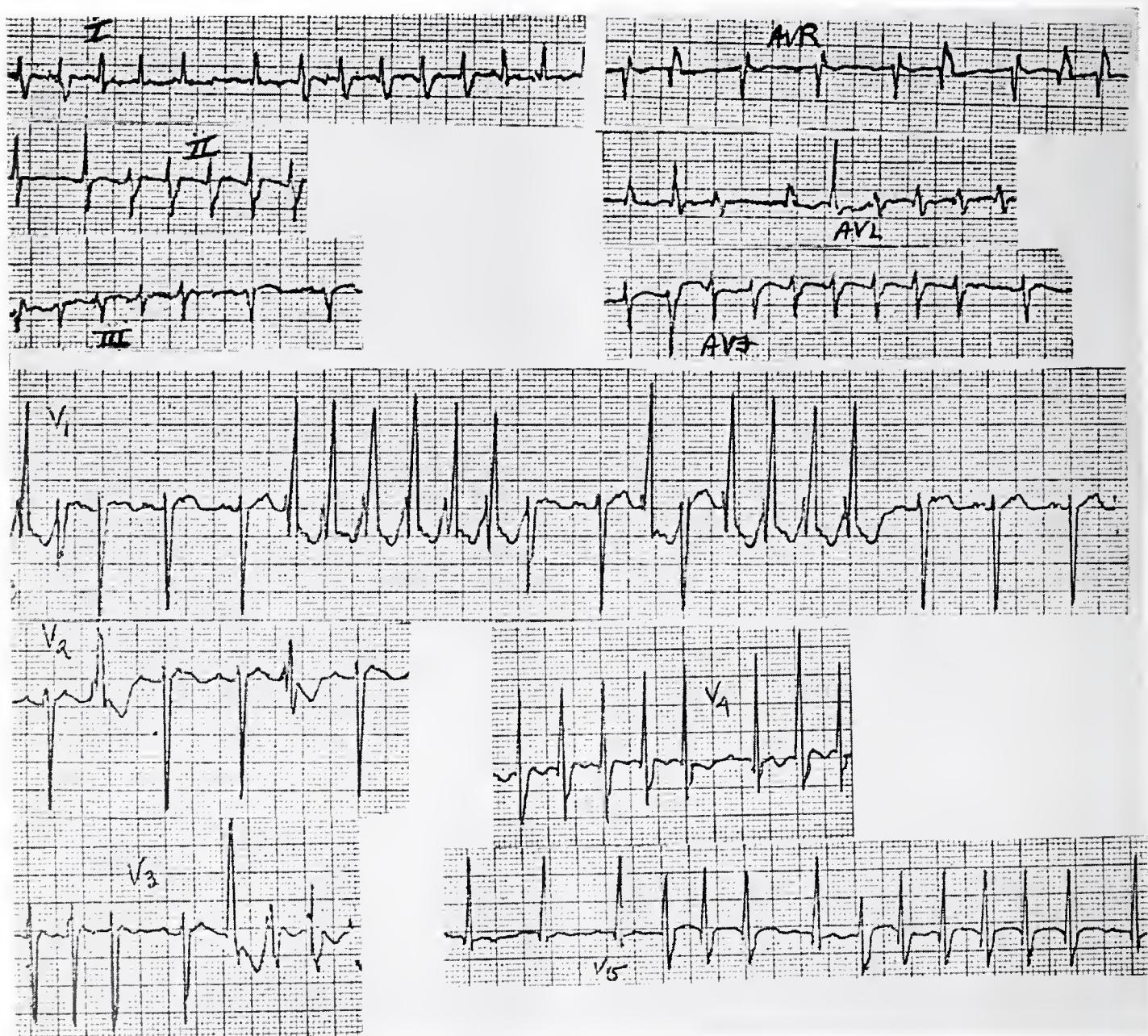
# ELECTROCARDIOGRAM

# OF THE MONTH



The Department of Cardiology, University of Arkansas Medical Center

(See answer on page 368)



66-year-old white male in congestive heart failure, on Digoxin.

John E. Douglas, M.D., Assistant Professor of Medicine  
University of Arkansas Medical Center  
4301 West Markham  
Little Rock, Arkansas 72205



## Pesticides Project

Phillip L. Peters\*

### REPLACEMENT OF DDT WITH TOXIC INSECTICIDES

The use of the insecticide DDT has been banned effective January 1, 1973. The replacement of DDT in its use on crops, primarily cotton and soybeans in Arkansas, will result in increased quantity of more toxic pesticides coming into use. DDT usage in Arkansas during the growing season in 1972 ranged in the vicinity of 3,000,000 pounds on some 250,000 acres of the cotton crop. In 1973 the chief substitute which will replace DDT for most crop uses, methyl parathion, is a highly toxic chemical and constitutes an acute hazard to untrained applicators. The predicted increase in the use of toxic DDT substitutes will result in a marked increase in the probability of accidents and deaths if adequate safety precautions are not observed.

Some of the techniques and procedures used for application of DDT are not consistent with the use of more toxic replacement chemicals because of the inherent toxicity of such chemicals to man and other animals. Methyl parathion is highly toxic by oral, dermal and respiratory routes. Some case studies indicate that poisoning episodes occur among aerial and ground pesticide applicators, commercial farmers and others who use mechanized spray equipment and who should have a degree of familiarity with toxic substances. Small farmers, who use less sophisticated equipment, are likely to be even more vulnerable to organophosphate-associated incidents. Serious dermal or respiratory exposure to toxic pesticides can occur easily in aerial or ground application operations, in cleaning or servicing application equipment, in mixing, loading and handling operations and by premature re-entry of treated fields. Such exposure, if adequate safety precautions are not observed,

can result in fatalities in a matter of a few hours if proper first aid and medical treatment are not administered.

The increased availability of the more toxic DDT replacements also presents the potential for an increase in the incidence of accidental poisoning in children and farm-dwellers who are not directly involved with these poisons. Improper storage procedures expose children to a needless risk. The dermal absorption potential of these compounds exposes adults as well as children to hazards resulting from contact with contaminated surfaces, clothing, etc.

Because parathion, methyl parathion and other potential DDT replacements are so toxic and are well-absorbed by all routes of administration, exposure to these compounds can occur in unique ways. Some of the cases reported in the United States are sited to illustrate the dangers.

Four 25-pound bags of a pesticide combination (10% TDE and 1% parathion) purchased for use on tobacco plants were placed on the porch of a farmhouse. A two-year old boy was playing on the porch. He broke one of the bags with a hammer and the material covered his hands. Thirty minutes after this incident the child was admitted to a hospital and expired approximately seven hours later.

A 29 year old man was placing bags of parathion upon a shelf while working in his agriculture supply business. One of the bags burst and the parathion powder spilled on the victim's face and hands. Although admitted to the hospital, the patient died within a few hours of the pesticide accident.

The inherent toxicity of methyl parathion and other organophosphate poisons which have replaced DDT in its use as an insecticide and the rapid progression of the poisoning episode after onset of symptoms illustrates the impor-

\*Arkansas State Department of Health, Bureau of Environmental Health Services, Little Rock, Arkansas.

tance of being able to recognize symptoms of the poisoning so proper treatment will not be delayed. Mistaken diagnosis can cause a delay in treatment and delay in treatment of parathion poisoning can be life-threatening. While this problem is not expected to occur often in adults who are occupationally exposed to parathion, children especially are likely to be misdiagnosed if one is not suspicious of possible contact with the insecticide. For this reason the possibility of parathion intoxication should be entertained in any case of a child who experiences a sudden onset of severe symptoms with no readily recognized cause.

Information regarding the symptoms and treatment in parathion insecticide poisoning follows:

Name: Parathion (0,0-diethyl-0-p-nitrophenyl thiophosphate). Type of Product: Insecticide.

**TOXICITY:** Acute oral LD<sub>50</sub> in female rat 6 mg/kg, in male rat 15-30 mg/kg. Estimated human lethal dose (adult) 20 mg. May be absorbed through skin, lungs and gastrointestinal tract.

**SYMPTOMS AND FINDINGS:** The signs and symptoms may be classified according to three points of action of acetylcholine.

**Parasympathetic Effects:** Usually the first will appear and include anorexia, nausea, sweating, epigastric and substernal tightness, heartburn and tightness in the chest. More severe exposures produce abdominal cramps, increased peristalsis, diarrhea, salivation, lacrimation, profuse sweating, pallor and dyspnea. Involuntary defecation and urination, excessive bronchial secretions, bronchospasm, and pulmonary edema may occur in severe cases of poisoning.

**Effects on Voluntary Muscles:** These generally appear after parasympathetic effects have reached moderate severity and include muscle twitching, fasciculations, and cramps, followed by weakness, ataxia and paralysis.

**Central Nervous System Effects:** Although they occur, they are less common than the parasympathetic and muscular effects, and may be entirely absent. They include tension, restlessness and emotional lability. Greater exposure to organophosphates produces headache, tremor, drowsiness and confusion. Lethal or near lethal doses may produce convulsions, areflexia, and finally respiratory arrest.

**TREATMENT:** Support respiration. Atropine (2 mg.) parenterally as soon as cyanosis is

overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. In the presence of severe anticholinesterase poisoning, 40 mg. of atropine sulfate may be given in a day without producing symptoms attributable to atropine. Positive pressure oxygen may be necessary. Induce emesis or lavage with water or 5% sodium bicarbonate. Decontaminate skin with soap and water. Never give morphine, theophylline or aminophylline. Watch patient constantly for 24 to 36 hours. Wear rubber gloves in removing clothes and washing patient. Protopam chloride (2-pyridine aldoxime methochloride) is recommended as a supplement to atropine after cyanosis is overcome. This is administered intravenously. The initial dose is one vial containing one gram in 20 ml. volume. The manufacturer's directions on the package should be followed. PAM has been used by some investigators up to a maximal total dose of 300 mg/kg in 48 hours. PAM is not a substitute for atropine. SEE Clinical Handbook on Economic Poisons for more detailed article. There is no evidence that children require a larger dose of atropine sulfate (0.015 to 0.05 mg/kg) or of pralidoxime chloride (15 mg/kg) than do adults.

**SOURCE OF INFORMATION:** NCPCC of DHEW-PHS Bulletin of Dec. 1972.

#### ANSWER—Electrocardiogram of the Month

The rhythm is erratic at 130 to 220 per minute. There are two different types of QRS complexes: one with P waves, a PR interval of 0.16 sec and QRS of 0.07 sec., and a relatively normal QRS configuration; the other type of QRS occurs at a rate of 220/min., is not clearly associated with P waves, has a QRS duration of 0.11-0.12 sec. and configuration of right bundle branch block as well as marked left axis deviation suggesting left anterior fascicular block. The deep S wave in I also might be considered to reflect left posterior fascicular block. This pattern is most compatible with physiologic trifascicular fatigue and delayed conduction as a result of the very rapid rate. They are compatible with supra-ventricular beats and aberrated ventricular conduction. What then is the atrial rhythm? In V<sub>1</sub>, a notched P wave is present before the normally conducted QRS complexes. In addition, however, the ST segments have similarly notched waves. At first glance these could represent atrial flutter waves at about 270/min. However, the interval between these P waves varies—note the lost portion of the V<sub>1</sub> rhythm strip. More likely these P waves occurring in the ST segment represent atrial echo or reciprocating beats which periodically set off a re-entrant junctional tachycardia with aberrated ventricular conduction.

Increasing this patient's digitalis eliminated his tendency for this arrhythmia.



## EDITORIAL

# Family Medicine—Whither—Not Whether?\*\*

James L. Dennis, M.D.\*

In 1930 practice was almost exclusively devoted to acute infectious and contagious disease, infant and maternal mortality and emergency surgery; the primary concern was the prevention of death. Today the physician is equally concerned with the prevention of illness, wellness care, chronic and degenerative disease, stress disorders, trauma, and major elective and corrective surgery. In 1930 the public was poorly informed and their expectations were low. Now they are widely informed and misinformed and their expectations are unrealistically high. Then the physician had a small office, a desk, a black bag and very little overhead. Today the physician requires a suite of offices supported by a full time staff, sophisticated and expensive equipment and high overhead cost. In 1930 home calls and office care were predominant — today the office and hospital predominate. Then hospitalization was rare. Today the hospital is a place people want to go when sick. The hospital team used to be only the doctor and a nurse. Today the hospital team is comprised of full time administrators, pathologists, radiologists, anesthesiologists, medical educators, technologists, dietitians, therapists and many others. Today great reliance is placed on the laboratory and scientific hardware. In 1930 medical school clinic faculty were volunteers; today they are full time. Then there were no malpractice problems, no insurance papers and no government forms. Today malpractice claims are common and often without justification. Liability costs are higher than office rent used to be and paper work is proliferating.

In 1931, 83 percent of all physicians were in general practice. During the past ten years more than 90 percent of this country's medical school

graduates entered a specialty field. Although we plan to do much better, Arkansas has, in comparison to other schools, done a better job — 25 percent of our graduates have continued to go into general practice but most of them have gone to the larger towns and cities, leaving many of our fine rural people without access to health care. The consequences of these changes are "coming home to roost." In my opinion the shortage of family doctors is the greatest unmet medical need in this Nation and I have felt so for a long time.

Ten years ago I lost face and status with some of the deans of our most prestigious medical schools when I told them that to continue to produce physicians without relating the kinds of products we were turning out to the needs of our people was irresponsible and dangerous.

One of the things that never changes is the fact that in the long run it is society that will decide what we do and society is beginning to decide. Ultimately there is going to be an emphasis on family medicine in medical education. The exact nature of the family physician and the exact way in which we will produce them is still being questioned but in the final analysis this too will be decided by the public.

Why am I so confident about the future of family medicine? The history of mankind suggests that as long as there are families they will need and want to identify with someone in the role of the family doctor. The core unit of society is the family. There are more families in our Nation today than ever before and there will be more tomorrow. Families are made up of babies, children, adolescents, mothers, fathers — and sometimes uncles, aunts, and grandparents. It is within this family milieu that we find the genesis of most physical illness, mental illness, social pathology, behavior problems, dietary and

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\*\*Presented to the Arkansas Academy of Family Physicians, April 25, 1972, Hot Springs, Arkansas.

other habits that lead to chronic disabling disorders and many common social ills. Medical researchers have persistently concerned themselves with the causes and the treatment of disease. The time has come for us to begin the search for the causes of health—something that is more than an absence of disease, and this too leads directly into the family. We have witnessed the development of psychiatry, internal medicine, mental health, preventive medicine, prenatal care, pediatric care, adolescent care, obstetrics, and geriatric care as individual specialties and these in turn have become further fragmented into sub-specialties—each concerned with “end pathology”, the genesis of which will almost invariably relate back to the family in some manner, if you just look far enough.

Because proposals to revitalize the concept of family medicine have immediately suggested to some a return to the horse and buggy doctor, many academicians and many specialists in practice seem to have hoped that the matter would just go away—but the very nature of man, coupled with the needs of today, indicate otherwise. A new emphasis on the family physician who is a knowledgeable specialist in the really very complicated aspects of family structure, human behavior, health and their relationships as well as common medical and surgical problems is essential if we are to meet societal needs and perhaps equally important—the public’s expectations.

It is not unusual to hear an internist, pediatrician, psychiatrist, and even an occasional obstetrician or surgeon remark “Why, I am a family doctor.” While each may have some of the attributes important to a family physician, each is limited in his ability to provide total family health care. More important perhaps are the limitations of his interests and training, plus the absence of a devotion to the intrinsic nature of family care.

By the same token, many persons who are currently in general practice, especially those in urban practice, will by choice exclude from their practice such things as pediatrics, obstetrics, or geriatrics. Since, by definition, a family includes babies, children, mothers and grandparents—such a general practitioner cannot truly be a family physician. This is an important point to make when differentiating the fine lines be-

tween general practice as compared to family practice.

From the standpoint of medical education, there has yet to evolve curricula and training programs that are as responsive as would seem desirable in terms of comprehensive family medical care that will be necessary in the future, nor has it yet been clearly demonstrated that medicine, government and the public is going to provide to the family doctor “specialist” the status and rewards of a recognized specialist. This problem must be solved for there is no place in the profession of medicine for a second class citizen. Establishment of status and rewards is one of the most important considerations for the recruitment of students into family medicine.

At this point in time, many of our Nation’s medical schools are developing programs that represent a belated indication of recognition of the problem. These vary from bona fide departments of family medicine, to departments of community medicine or comprehensive care. Some of these responses appear to be defensive in nature but some are genuinely concerned with the production of a “primary physician” who would, in essence, be a family doctor. Because any general practice specialty training necessarily leans heavily on the other disciplines of medicine, there remains reasonable doubt about how well board certification can be accomplished and whether it will break down the barriers of professional territorial prerogatives. Approaches to these matters bring out the “union” cards. Many are beginning to accept the fact that there is going to be a resurrection of family medicine but some of them are not yet ready to accept a holistic concept of family medicine as a bona fide medical school and medical practice discipline. Again, public opinion and time is on the side of family medicine. In the past ten years pediatrics and internal medicine have become so fragmented by sub-specialties that they are now in a situation not unlike that of general practice ten or fifteen years ago. I now find that when I am introduced as a pediatrician someone always asks “And what is your specialty?” Since it is in the sub-specialty areas from which new scientific knowledge and technology will come, we should take care not to destroy these sources for future advances in pediatrics, medicine and the other major areas of specialty care. In my

opinion these departments should be encouraged to continue the pursuit of new knowledge in depth but at the same time to develop, in collaboration and cooperation with a department of family medicine, a broadly based training program for family medicine — to include all who are interested. Logic, economics, and public pressures, stemming from needs will eventually force many of these changes if we do not anticipate them.

The Family Medicine Program at the University of Arkansas School of Medicine is really just beginning. I am optimistic about its future. Dean Shorey is not only enthusiastic but 100 percent committed to do whatever has to be done to make it a major department. It was originally set up as a division because it did not initially have the people, the budget and the program to justify otherwise but he made it a free-standing division that reported directly to him just as the major departments do. You must recognize that his first big task was to gain acceptance and support from the specialty department heads. From a position of disbelief, if not open hostility, the academic units have come to accept family medicine as a legitimate academic effort. This is going to be a successful program but it will have to go through periods of growth, development and adaptations before it finally evolves a curriculum and program that is really tailored to the needs of the people of Arkansas.

Certainly the general practitioners of Arkansas have a legitimate interest in the Medical School's Department Of Family Medicine. Your opinions are valued but I urge caution about overt political pressures. One of the big problems of acceptance of the program by the faculty appears to be almost won. Overt political pressure from the outside will create resentment, resistance, and opposition that can undo much progress that has been gained. We need to talk about what we are for instead of just being against something.

The place to discuss differences and register sincere concerns is at the conference table of our own professional organizations. We are seeing more and more political intrusion into medical affairs — let's don't invite it. I would set up and operate a family medicine department differently in some respects from the ones with which I have been associated — both here and in Oklahoma. Each one of us has strong personal feel-

ings about such things — yet we can agree on the goals. Each of you practice medicine — but in different ways — and you would resent outsiders telling you how to run your office and handle your patients. If our Family Medicine Department ever looks like it is not accomplishing our goals then we will all have to quietly get together and change things. In the meantime, let's help make it go!

In summary, as long as there are families there will be a need for family doctors. Medical schools must produce them and in relation to public needs and public expectations. We are all concerned about change, the loss of our professional freedoms and the dangers of political controls. The only way we are going to preserve our freedoms is to meet the public needs. If a free medical profession is to survive, it is going to require a sound base of family practice. We have to produce them. We need your help to produce them, we need your help to keep them in Arkansas and we need your help to sell them on rural areas in Arkansas. You can't sell a house, a suit, a car or rural practice by talking about troubles and problems. Rural Arkansas is great, family practice is a wonderful mission, and you have a darn good medical school. Let's start accentuating the positive. We will all be happier and more successful in doing the difficult things that we simply have to do.

The question is not whether, but whither!



#### **Asymptomatic Mediastinal Mass**

L. J. Fontenelle et al (USAF Medical Center, Lakeland AFB, Texas 78236)  
*Arch Surg* 102:98-102 (Feb) 1971

Of 144 patients with undiagnosed mediastinal masses, 104 (72%) were asymptomatic and their lesions were discovered on routine chest x-ray. There were 40 malignant tumors of which 23 (57.7%) were asymptomatic at the time of discovery. This represents one of the largest asymptomatic series of mediastinal masses in the literature. It is believed that the relatively low surgical morbidity and mortality (9% and 2%, respectively), as well as the early surgical detection of malignant disease in this series can justify the recommendation for early operative intervention.

## MEDICINE IN THE



### THE MONTH IN WASHINGTON

The American Medical Association protested vigorously against President Nixon keeping physicians under federal regulation in Phase III of the economic controls program.

A largely voluntary set of wage-price controls was substituted for all segments of the nation's economy except food, health care activities, the construction industry, and interest and dividends.

John R. Kernodle, M.D., chairman of the AMA Board of Trustees, warned that such discriminatory treatment well could result in health care support personnel leaving the field. Physicians, he said, could not be expected to accept it.

"Controls are relaxed in other areas, yet the discrimination against physicians and some three million others who serve America's health needs is now even more sharply focused," Dr. Kernodle said in a statement. "A very real possibility exists that there will be a flight of allied, ancillary and support personnel from the health field, jeopardizing the quality of care being delivered."

Dr. Kernodle pointed out that, "even though the regulations as applied to health care were clearly discriminatory," the AMA had urged physicians to cooperate and they had done so with a result that their fees nationwide had increased by only 2.7 per cent since August, 1971, when Phase I began. This compared with 4.3 per cent for the consumer price index, 6.2 per cent for a semi-private hospital room, and 14 per cent for legal services.

Noting that controls never were imposed on lawyers or other self-employed professionals, he said that physicians now might have to reconsider their attitude of cooperation.

"Since its inception, we in medicine have made every effort to cooperate with the government's program," Dr. Kernodle said. "While the Lords of Labor walked out, we remained in the program and tried to make it work in the public interest. The results speak for themselves.

"We have received very little cooperation in return . . .

"Thirteen months ago, we urged physician compliance. In light of the . . . record, we shall now have to reconsider that advice."

Dr. Kernodle later took the AMA protest directly to President Nixon in a letter. It follows:

Dear Mr. President:

The American Medical Association has applauded your Administration's efforts to stabilize prices and wages for the economy. The Association has supported the overall objectives of the Economic Stabilization Program and actively cooperated with the Cost of Living Council through the Health Services Industry Committee in the application of price controls on physicians' fees.

A look at the physician component of the Consumer Price Index gives an example of the effect that "voluntary compliance" can have in curbing inflation. As a result of this Association's activities, physicians' fees rose only 1.7% under Phase II. This constitutes one-third the rate of increases prior to the Economic Stabilization Program. In this respect, we have surpassed the original expectations of the Cost of Living Council, which called for halving the inflationary rates prior to Phase I.

In view of our demonstrated success during the past year, you can imagine our dismay at the announcement of plans for Phase III. Although most of the economy is now expected to "voluntarily" adhere to the general guidelines of the Cost of Living Council, the medical profession has been placed under mandatory regulations. Indeed, the medical profession has once again been singled out under special controls. The physicians of America will not accept such discriminatory treatment. This profession must not become the victim of efforts to curb inflation in the most expensive components of the health care industry, which due to their internal financial structure have been unable to decelerate increases in their prices.

The record of the past year clearly demonstrates that physicians are able to effectively control their fees through voluntary action. The record of the past year is equally clear that physicians' fees have not been an inflationary factor in health care costs. We, therefore, request that the medical profession be exempt from special regulations under Phase III, and respectfully request an early opportunity to visit with you on this and other matters of critical importance to the Nation and the medical profession.

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Some 126 senators and congressmen have introduced an improved and expanded version of the American Medical Association backed Medicredit bill for national health insurance.

Based on the principle of using tax credits to spur the purchase of comprehensive health insurance for all Americans, the Medicredit proposal has four chief bipartisan sponsors — Sens. Vance Hartke (D-Ind.) and Clifford Hansen (R-Wyo.), both of the Senate Finance Committee, and Reps. Richard Fulton (D-Tenn.) and Joel Broyhill (R-Va.), both of the House Ways and Means Committee.

Russell B. Roth, M.D., AMA's president-elect, joined the chief sponsors of the proposed legislation after its introduction into the Congress at a Capitol Hill press conference and detailed the new provisions of Medicredit 1973 which include dental care for children, emergency dental care for all ages, and improved home health services.

Dr. Roth said that the new Medicredit proposal should cost about \$12.1 billion, approximately the same as last year's bill. He pointed out in explanation, however, that while new benefits have been added to the 1973 version, certain modifications had been made to the new bill's deductible and coinsurance features.

The Medicredit bill is a three-pronged approach to providing health insurance protection, according to Dr. Roth. The proposal would:

- pay the full cost of health insurance for those too poor to buy their own,
- help those who can afford to pay a part of their health insurance cost. The less they can afford to pay, the more the government would pay,
- see to it that no American would have to bankrupt himself because of a catastrophic illness.

On the subject of the catastrophic provisions of the bill, Hartke said:

"I have been appalled, as have most of us, by the medical horror stories that have been brought to our attention. Hardly a week passes without news of yet another family pauperized by catastrophic illness . . .

"Under Medicredit, the tragedy of catastrophic illness would no longer be worsened by the threat — or the actuality — of financial catastrophe. No American family would ever again face the prospect of losing its savings, or its home, or its solvency because of health or medical bills."

Broyhill compared the Medicredit bill with other national health insurance proposals in the Congress.

"According to a report prepared for the House Ways and Means Committee during the last session, the Kennedy-Griffiths proposal would have cost the taxpayers a staggering \$91 billion a year," he said. "This would have meant that health alone took up about one-third of the entire Federal budget . . .

"Rich or poor, everyone under this proposal would have Uncle Sam pay all or most of his health care bill every year.

"The Medicredit proposal, on the other hand, is designed to spread the cost of medical and health care fairly and equitably over the population on the basis of each American's ability to pay."

Stating that Medicredit is designed to solve the most immediate and pressing problems of the nation's health care system, Hansen emphasized that the AMA plan would "unlock the financial doors that bar many Americans from high quality medical care . . . stress preventive care — annual check-ups, out-of-hospital diagnostic services, well baby care, dental care for children, and home health services . . . provide psychiatric care without limit . . ."

Predicting that Medicredit would wind up with 200 sponsors in the 93rd Congress . . . 25 more than in the 92nd . . . Fulton noted that a third of the sponsors were Democrats, which establishes the AMA-backed bill as the national health insurance proposal with the most bipartisan support.

"What this bill's sponsors are endorsing," Congressman Fulton said, "is an approach to the problem of financing health care. What we are

all saying, I think, is that we do not believe that the federal government can—or should—assume the entire burden by itself; that we should build on what we have instead of junking it and starting out again from scratch; and that the government role should be confined to that of helping those who need help . . . ”

\* \* \*

President Nixon plans to end the 26-year-old Hill-Burton program of federal grants for hospital construction and the regional medical program. His fiscal 1974 budget also calls for cutbacks in programs for community health centers, children's mental health and alcoholism.

Under the budget, medicare patients would have to pay an additional estimated \$1.2 billion of their hospital and medical bills in the next 18 months.

Aside from medicare outlays of \$12.6 billion, the federal budget for health—most of it under the Department of Health, Education and Welfare—calls for expenditures of \$9.1 billion in the 12 months, an increase of \$700 million over the current fiscal year which ends June 30.

Some National Institutes of Health research programs would be cut back but spending on cancer would climb \$91 million to \$445 million, and outlays on heart and lung diseases would increase \$28 million, to \$250 million. Special emphasis would be placed on those types of cancer that cause the highest mortality—lung, breast, large bowel, prostate, bladder and pancreas. Heart research would focus on preventing arteriosclerosis and hypertension.

The NIH program of support for training of research scientists—now \$150 million a year—would be discontinued. The federal government also would reduce its support for training nurses, veterinarians, optometrists, podiatrists, pharmacists and public health personnel. Federal support would be concentrated on training of physicians and dentists.

President Nixon's plans for cutbacks in some health expenditures were foreshadowed by two vetoes of HEW appropriation bills last year.

“My strategy for health in the 1970s stresses a new federal role and basic reforms to assure that economical, medically appropriate health services are available when needed,” he said in his budget message.

An HEW official described the cutbacks as “a conscious decision to identify those programs

that have fulfilled their purposes already or are unable to.” HEW officials said the regional medical program, which initially was designed to combat heart disease, cancer and strokes, never achieved its goal of providing better planning of health resources locally or speeding research knowledge into therapy. Support would be continued for the 515 centers established under the nine-year-old community mental health program but funds would not be provided to expand the number to the original goal of 2,000.

In the medicare program, the Administration is beginning to put into effect non-legislative reforms that are estimated to save the government \$342 million during the remainder of this fiscal year. The President said he will ask Congress for authority to shift \$600 million a year in charges to medicare patients.

The combined effect of the legislative proposals and administrative actions would be a net savings to the federal government in fiscal year 1974 of \$849 million, according to the proposed budget for the Department of Health, Education, and Welfare.

Effective January 1, 1974, if congress agrees:

— Those who are hospitalized would have to pay the first day's charge for room and board and 10 per cent of the charges for all hospital services thereafter. As it is now, a medicare patient pays \$72—the national average cost of one day in a hospital by a medicare beneficiary—for the first day of hospitalization and nothing more until the 61st day when he begins paying \$18 a day toward his charges.

A medicare spokesman said that for a patient hospitalized 13 days, the average for beneficiaries, the cost could increase from \$72 to a minimum of \$158.40. About five million disabled or aged 65 or older will be hospitalized under medicare during the next fiscal year.

— Under medicare Part B, the voluntary doctor insurance that will cover 22.5 million persons next year, the patient would pay the first \$85 of his doctor bills and 25 per cent of the remainder. He now pays a \$60 deductible and 20 per cent of subsequent charges. For a patient with a \$500 doctor bill, his share of the cost would increase from \$148 to \$188.75. About 11.6 million beneficiaries will receive medical care during the next fiscal year.

The Nixon Administration plans to let the draft law lapse June 30 for physicians and dentists as well as general military personnel.

In announcing in late January that no more draftees would be called up for military service, outgoing Defense Secretary Melvin R. Laird urged that congress approve pay incentives for military doctors, dentists, nurses and other health personnel "so that they also can be put on a volunteer basis." This led some to infer that physicians and other health personnel might be drafted before expiration of the draft law.

But the defense department later gave assurances that it was not planned to call up any more physicians, that Laird only was emphasizing the importance of the pay incentives.

The draft call for physicians was for 1600 in late 1972. There now are about 14,000 medical personnel in military service.

\* \* \* \*

#### **Pharmaceutical Association Favors Tighter Controls on Anti-Obesity Drugs**

The Arkansas Pharmaceutical Association has recommended that its members discontinue the stocking of anti-obesity drugs and stock only the absolute minimum of narcotics. The recommendation by the Statewide professional organization came after a survey of members indicated a four to one majority favoring such action. Mr. Donald W. Stecks, president of the Arkansas Pharmaceutical Association, explained that the individual members will determine their own policies, but that the Statewide action was prompted by a number of factors. These included abuse of anti-obesity drugs, increasing forgeries of prescriptions, and mounting numbers of robberies and burglaries.

In December 1972, the Food and Drug Administration issued a bulletin questioning the use of such drugs in the treatment of obesity and pointing out the significant potential for dependence and abuse. Among the specific drugs evaluated by the FDA were amphetamine preparations such as Dexedrine, Dexamyl, Biphetamine, Desoxyn, and other closely related congeners.

Mr. Stecks stated that in such cases no emergency is involved and the pharmacist can fill the needs with an insignificant delay. Mr. Stecks also stated that while pharmacists are being advised of the recommendation, it is the suggestion of the association that a small stock of such drugs

be carried for those few patients who have narcolepsy or are hyperkinetic.



## **THINGS TO COME**

### **"Psychiatric Emergencies"**

#### **A Medical Educational Film**

Sandoz Pharmaceuticals, East Hanover, N. J., has announced the release of a new medical educational film:

*"The Psychiatric Emergency  
... therapy, discharge, aftercare"*

by

Ronald C. Smith, M.D.

Associate Clinical Professor of Psychiatry  
University of Southern California  
School of Medicine  
Los Angeles, California

This is a 17-minute color film about three patients at the Brea Hospital Neuropsychiatric Center, Brea, California, admitted in states of psychiatric emergency typical of most admissions from the community in institutions of this kind.

Al — a 69-year-old retired newspaperman who lived alone as a recluse, withdrawn totally from life. He recently became so anxious and depressed that he attempted suicide by trying to slit his throat. After emergency procedures at Los Angeles County Hospital, he was sent to the Brea Hospital Neuropsychiatric Center in a hallucinatory state, completely withdrawn and out of touch with his surroundings.

Janice — a teenage girl whose chaotic homelife caused her to attempt suicide. Brought to Brea Hospital in a mute and anxious state by a policeman, Janice attempted to escape as she was being admitted to the ward. As an adolescent, it was essential to provide the necessary home-life structure that is so vital in a person in her age group.

Herschel — a young adult schizophrenic who had been hospitalized several times since age 19, he was refractory to previous treatment programs and medications. Unable to withstand the increasing pressures of his academic and home lives, Herschel failed to show up for his first day of classes and came alone to Brea Hospital for help. He responded favorably to treatment

## THINGS TO COME

and was able to attend intensive therapy several hours after. The next day Herschel returned to school, although he continued to reside at the hospital, and plans were made for him to move into a campus dormitory shortly. He exemplifies the "walk-in" psychiatric emergency whose serious condition can often be mistaken or overlooked.

This film shows how patients in psychiatric emergency from the community, were managed under a modern program which follows current and effective therapeutic principles based on the latest Crisis Intervention techniques:

- rapid screening
- intensive therapy
- I.M. medication
- minimal hospitalization
- early discharge planning
- scheduled aftercare

The purpose of this film is to demonstrate how an emergency psychiatric service can be effectively implemented in a general hospital or mental health delivery center with a minimal professional staff. The film stresses that comprehensive management of the psychiatric emergency can be one of the most important factors in preventing future relapses and therapeutic failures.

### American Board of Family Practice Certification Examination

The American Board of Family Practice will give its next two-day written certification exami-

nation on October 20-21, 1973, in various centers throughout the United States. It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications in the Board office is August 1, 1973. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary  
American Board of Family Practice, Inc.  
University of Kentucky Medical Center  
Annex #2, Room 229  
Lexington, Kentucky 40506

### Summer Program in Human Sexuality

A "Summer Program in Human Sexuality" will be held July 8-19, 1973, with lecture courses, forums on socio-sexual issues, sex counseling symposia, attitude-reassessment programs, and informal workshops. \$325.00 includes housing. Registration ends June 18. Write: Institute for Sex Research, 416 Morrison Hall, Indiana University, Bloomington, Indiana 47401.

### Renal Transplantation Symposium

A Renal Transplantation Symposium will be held May 18 and 19, at the Fairmont Mayo Hotel in Tulsa, Oklahoma. The Symposium is being sponsored by Hillcrest Medical Center and the Renal Transplantation Committee with the support of The John Zink Medical Institute. For further information contact: T. Richard Medlock, M.D., Director, Renal Laboratory, Hillcrest Medical Center, Utica on the Park, Tulsa, Oklahoma 74104, phone: AC 918 584-1351.



### Independence County Medical Society

Newly elected officers of the Independence County Medical Society for 1973 are: Dr. W. J. Ketz, president; Dr. Charles Taylor, vice president; Dr. Troy Raney, secretary-treasurer; Dr. Jim E. Lytle, delegate; and Dr. Bob Smith, alternate delegate.

### PROCEEDINGS OF SOCIETIES



### Columbia County Medical Society

Dr. Charles H. Weber has been elected to serve as president of the Columbia County Medical Society for 1973. Other newly elected officers are Dr. Joe Rushton, vice president and president-elect; Dr. Robert Hunter, secretary-treasurer; Dr. Charles Kelley, delegate; and Dr. Scott McMahan, alternate delegate.

### Pulaski County Medical Society

The Pulaski County Medical Society presented a one-hundred dollar scholarship to the Veterans Club at the University of Arkansas at Little Rock for having the most donors at a recent blood drive at UALR. The Club provided thirty-eight of the one hundred donors. The Medical Society also presented a fifty dollar scholarship to the student whose name was drawn from among the names of the donors.

## PERSONAL AND NEWS ITEMS

### Physician Appointed

Governor Dale Bumpers has announced the appointment of Dr. J. Albert Johnson of Jacksonville to a seven year term on the Board of Trustees of State College of Arkansas at Conway.

### Physicians Locate

Dr. Hugh A. Nutt and Dr. Gerald L. Guyer, both family physicians, have joined Dr. Mahlon Maris in his practice at the Boone County Medical Center in Harrison.

### Dr. Wood Reappointed

Dr. John P. Wood of Mena has been reappointed to the State Tuberculosis Sanatorium Board of Trustees for a term to expire in 1980.

### Physician Receives Award

Dr. W. M. Wells of Heber Springs was presented a Distinguished Lieutenant Governor Award for 1971-72 for outstanding leadership during his term as Lieutenant Governor of Zone Two, Arkansas District of Optimist International. Out of a total of four hundred thirty-one men serving as Lieutenant Governor in the thirty-nine districts of the International, only seventy-six achieved the Distinguished Lieutenant Governor Award.

### Dr. Downs Presents Paper and Has Article Published

Dr. Ralph Downs of Little Rock presented a paper entitled "Solitary Pelvic Kidney — Its Clinical Implication" at the 41st Annual Meeting of the American Academy of Pediatrics, Section on Urology, which was held October 14, 1972, in New York City. The paper was published in the first issue (January 1973) of *Urology*, a new specialty journal.

### Physician Named

Dr. G. Max Thorn, Director of Medical Education at St. Vincent Infirmary in Little Rock, has been named to head the Infirmary's new office of medical affairs. Dr. Thorn joined the Infirmary in 1964.

### Dr. Moore is Guest Speaker

Dr. Berry L. Moore of El Dorado was the guest speaker at the Layman's Day Program at the First Baptist Church in Monticello on February 4th.

### Physicians Attend Workshop

Dr. John P. Wood of Mena, president-elect of the Arkansas Medical Society, and Dr. Kemal Kutait of Fort Smith attended the American

Medical Association Political Action Committee's Public Affairs Workshop in Washington, D. C., March 10-11. Mrs. W. Payton Kolb of Little Rock, Secretary of the Arkansas Political Action Committee, also attended the meeting.

### Dr. Wallick Opens Clinic

Dr. Paul A. Wallick recently opened a new clinic in the Health, Education and Cultural Complex in Monticello. The new clinic features individual lab, X-ray, emergency and minor surgery rooms, with ten patient examination and consultation rooms. The clinic can accommodate three doctors, and can expand to serve seven physicians.

### RMP Consultants Meet with Physicians

Dr. Joseph H. Bates of Little Rock met with physicians in the Gurdon area on February 4th, and Dr. Taylor Prewitt of Fort Smith visited with physicians in the Nashville area on February 22nd. Dr. Bates and Dr. Prewitt are consultants in the Advisory Committee for Rural Medical Extension Service program, a University of Arkansas Medical Center project funded by the Arkansas Regional Medical Program.



### Saline County Medical Auxiliary

Mrs. W. Myers Smith of North Little Rock, President of the Woman's Auxiliary to the Arkansas Medical Society, attended the meeting of the Saline County Medical Auxiliary on February 12th. The meeting was held at the home of Mrs. Walter Mizell, president of the Saline County Auxiliary. Others attending the meeting were: Mrs. W. Payton Kolb of Little Rock, co-chairman of the Auxiliary's Legislation Committee; Mrs. Paul Cornell of Little Rock, chairman of AMERF; Mrs. Marvin Kirk of Benton, chairman of the International Health Committee; and Mrs. John Ashby, secretary of the Saline Medical Auxiliary.



## NEW MEMBERS

### **Dr. Robert Ray Hull**

Dr. Robert R. Hull is a new member of the Benton County Medical Society. He is a native of Nashville, Tennessee.

Dr. Hull received his B.S. degree in 1966 from the Tennessee Polytechnic Institute, and in 1971, he was graduated from the University of Tennessee College of Medicine. His internship was completed at St. John's Hospital in Tulsa, Oklahoma. Dr. Hull is a family physician. He has been in practice in Rogers for the past six months.

### **Dr. Noel F. Ferguson**

The Boone County Medical Society has recently added the name of Dr. Noel F. Ferguson to its membership roll. A native of Forest City, Dr. Ferguson graduated from the University of Arkansas School of Medicine in 1966. Dr. Ferguson completed his internship at Baptist Memorial Hospital, Memphis, Tennessee, and received residency training in General Surgery at the City of Memphis Hospitals. He completed a residency in Urology at the University of Arkansas Medical Center.

A Urologist, Dr. Ferguson began practicing at the Boone County Medical Center in Harrison in July 1972.

### **Dr. Gerald L. Guyer**

Dr. G. L. Guyer has been accepted for membership in the Boone County Medical Society. He was born in Searcy, Arkansas.

Dr. Guyer attended Arkansas A & M College at College Heights before entering the University of Arkansas School of Medicine, from which he was graduated in 1967. His internship was completed at St. Vincent Infirmary in Little Rock. He served in the United States Air Force. Dr. Guyer, a family physician, is associated with Dr. Mahlon Maris at the Boone County Medical Center in Harrison.

### **Dr. Hugh A. Nutt**

Dr. Hugh A. Nutt is also a new member of the Boone County Medical Society. A native of For-

dyce, Arkansas, Dr. Nutt received his B. S. degree from the University of Arkansas in 1966, and was graduated from the University of Arkansas School of Medicine in 1968. He completed his internship at John Peter Smith Hospital in Fort Worth, Texas, and also did his residency work in Family Practice at the same institution. Dr. Nutt served in the United States Navy from October 1970 to March 1973.

He is associated with Dr. Mahlon Maris in the general practice of medicine at the Boone County Medical Center in Harrison.

### **Dr. Thomas J. Simpson**

Dr. Thomas J. Simpson has been accepted for membership in the Boone County Medical Society. Dr. Simpson received his B. A. degree from the University of Arkansas and was graduated from the University of Arkansas School of Medicine in 1965. His internship was completed at the United States Air Force Medical Center, Keesler Air Force Base, Biloxi, Mississippi. He completed a residency in Obstetrics and Gynecology at the University of Kentucky. A specialist in Obstetrics and Gynecology, Dr. Simpson is located at the Boone County Medical Center, Harrison.

### **Dr. Don R. Vowell**

Dr. Don R. Vowell is another new member of the Boone County Medical Society. He is a native of Fort Smith, Arkansas. Dr. Vowell was graduated from Hendrix College in Conway in 1961, and in 1965, he was graduated from the University of Arkansas School of Medicine. He completed his internship at the Jewish Hospital of St. Louis, Missouri. His residency work in Orthopaedics was at the University of Arkansas Medical Center. He served two years in the United States Army.

Dr. Vowell specializes in Orthopaedics. His office is at 120 East Bower Street in Harrison.

### **Dr. Harvey O. Edwards**

Dr. Harvey O. Edwards is a new member of the Craighead-Poinsett County Medical Society. He was born in Pipe Creek, Texas. Dr. Edwards was graduated from the University of Arkansas and the University of Arkansas School of Medicine in 1961 and 1965, respectively. He interned at the University of Arkansas Medical Center and stayed on there for his residency work in Orthopaedics. Dr. Edwards served in the United States Coast Guard. He was in practice for two years in San Antonio, Texas, before joining Dr. Larry Mahon and Dr. W. T. Shanlever in the practice of Orthopaedics at 924 South Main in Jonesboro.

**Dr. Frank Marshall James**

Dr. Frank M. James, a native of Henry County, Kentucky, has been accepted for membership in the Craighead-Poinsett County Medical Society. He received his pre-medical education at the Illinois Institute of Technology, Chicago, Illinois, and his medical education from the University of Oklahoma School of Medicine, Oklahoma City, graduating from the latter in 1947. He completed his internship at the W. W. Backus Memorial Hospital, Norwich, Connecticut. His residency work in Psychiatry and Neurology was at the Central State Hospital, Norman, Oklahoma.

Dr. James is a member of the American Psychiatric Association. Since October 1972, he has been associated with the George W. Jackson Mental Health Center in Jonesboro, where he specializes in Psychiatry and Neurology.

**Dr. James William Sanders**

The Craighead-Poinsett County Medical Society has also added the name of Dr. James W. Sanders to its membership roll. Dr. Sanders was born in Memphis, Tennessee. He attended Southwestern at Memphis and was graduated from the University of Tennessee College of Medicine in 1959. His internship and a residency in Surgery were completed at the City of Memphis Hospitals. Dr. Sanders was in practice in Tuckerman, Arkansas, for two years, and in Clarksdale, Mississippi, for four years.

He is certified by the American Board of Surgery. His office is located at 505 East Matthews in Jonesboro.

**Pulaski County Medical Society**

The following interns and residents are new members of the Pulaski County Medical Society:

**University of Arkansas Medical Center:**

Luis F. Ardon, Resident — Nephrology  
Robert A. Bell, Resident — Urology  
Carol A. Mittelstaedt, Resident — Radiology  
Charles D. Sullivan, Intern

**Arkansas State Hospital:**

Charles B. Covert, Resident — Psychiatry

**Baptist Medical Center:**

Adam Roszel, Intern

**Dr. Clarence William Koch, Jr.**

The White County Medical Society has announced that Dr. Clarence W. Koch, Jr., is a new member of that Society.

A native of Little Rock, Dr. Koch attended the Little Rock University and was graduated from

the University of Arkansas School of Medicine in 1969. Following completion of his internship at St. Vincent Infirmary, he served two years in the United States Air Force. Dr. Koch is a family physician. Since July 1972, he has been in practice at 607 Woodruff in Searcy.

**Dr. Sidney W. Tate**

Dr. Sidney W. Tate, a native of Stephenville, Texas, is also a new member of the White County Medical Society. He received his B.S. degree from Harding College in Searcy in 1963, and was graduated from the Louisiana State University School of Medicine in 1969. His internship was completed at Charity Hospital in New Orleans. From 1970 to 1972, he served in the United States Army.

A family physician, Dr. Tate is associated with the Jackson Clinic in Judsonia.

**Dr. Philip Emerson Thomas**

Dr. Philip E. Thomas of Alexander died February 26, 1973, at the age of eighty-two.

He received his medical education at the Memphis Hospital Medical College and the Eye, Ear, Nose and Throat Division of the Ochsner Clinic in New Orleans. He practiced in Little Rock from 1920 until his retirement several years ago. Dr. Thomas was one of the first physicians to be named an aviation medical examiner by the Federal Aviation Administration, a position he held for thirty-four years.

Dr. Thomas was a member of the Second Presbyterian Church. He was a Life Member of the Arkansas Medical Society, American Medical Association, and the Pulaski County Medical Society. He held a membership in the Aerospace Medical Association and the Civil Aviation Association. Dr. Thomas was a veteran of World War I; a member of the American Legion, a Mason, and a member of the Mystic Shrine.

He was on the staff of the Arkansas Deaf School, Arkansas School for the Blind, and St. Vincent Infirmary.

Dr. Thomas is survived by one daughter, one sister, and two grandchildren.



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Vol. 69 No. 12

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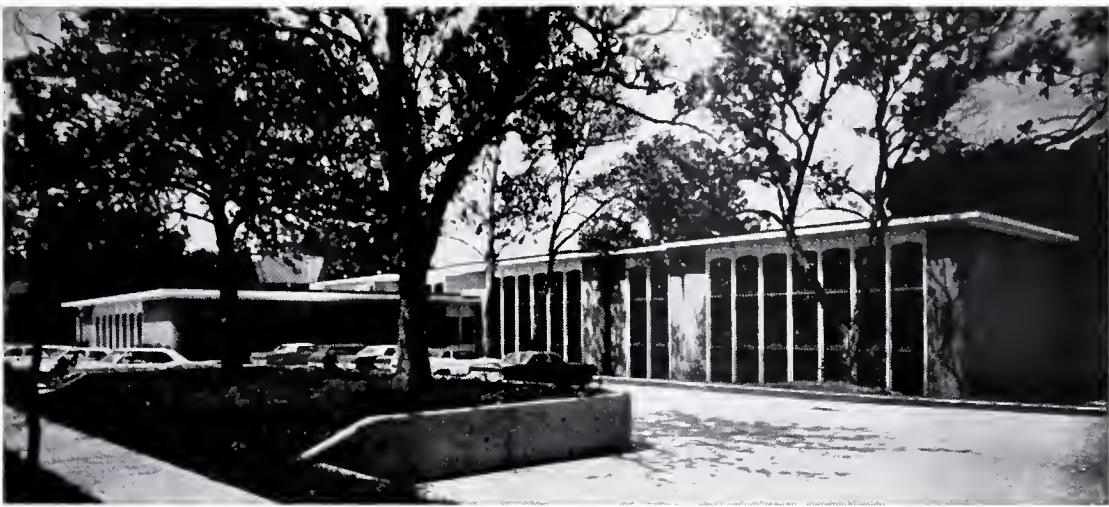
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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

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## Percutaneous Cordotomy

Joe Filbeck and Warren C. Boop, Jr., M.D.\*

Since Martin performed the first spinal cordotomy at the urging of Spiller in 1912, this operation has been performed on innumerable patients all over the world. So undeniable are the merits of cordotomy in the relief of pain, that it has stood the test of time despite a mortality rate ranging up to 25 percent and a prolonged period of convalescence. In a move that has been lauded as both bold and imaginative, Dr. Sean Mullan of the University of Chicago set out to eliminate these disadvantages. Over the past decade, his technique of percutaneous cordotomy has practically replaced the need for open surgical cordotomy. Anyone with an intractable pain problem who is in a state of health to withstand a spinal puncture in the x-ray department may now be considered a candidate for relief of pain through percutaneous cordotomy. Both Mullan<sup>1,2</sup> and Rosomoff<sup>3,4</sup> have reported independent series of percutaneous cordotomies in excess of 400 patients with beneficial results in over 80 percent of these patients, and a mortality of less than 3 percent. With this considerable experience, Mullan has indicated that he feels the main indication for this procedure is the pain of cancer. It has been our impression that pain resulting from more benign processes is less reliably dealt with by percutaneous cordotomy. In an effort to evaluate this better, our cases and their results from July 1970, through December 1971, have been reviewed. This report concerns the findings of that review.

### TECHNIQUE

The patient is prepped and draped at a site approximately 1 cm below and posterior to the mastoid tip. The skin is infiltrated with 1% xylocaine and an 18 gauge spinal needle is inserted through the skin. Under x-ray control the needle is guided to the space between C-1 and C-2 laminae and posterior to the vertebral body. The dura is penetrated at this level and

2 cc's of cerebral spinal fluid are aspirated and emulsified with 2 cc's of pantopaque. Then 1 to 2 cc's of this total mixture are injected into the cervical subarachnoid space. X-rays are taken to localize the needle to the area just anterior to the dentate ligament, which is outlined on the x-ray with the pantopaque mixture.

An electrode coated with teflon is inserted through the 18 gauge needle into the cord and with weak electric direct current the patient's response to stimulation is elicited until the induced response is localized in the proposed area of analgesia. When the appropriate response is obtained, a radiofrequency lesion is generated through the electrode. With gradual increases in current there is constant checking of motor function and sensory deficit. When the desired analgesia is maintained for at least five minutes the electrode and needle are withdrawn.

### RESULTS

The 17 patients in our series underwent 20 percutaneous cordotomies. The three repeated cordotomies were necessary when the initial results were found inadequate because of islands of retained sensation or the inability to complete the procedure or attain analgesia for technical reasons. With the completion of treatment 12 of the 17 patients were either totally free from pain or had satisfactory relief. This represents an overall success of 71% but when the cases are considered on the basis of benign versus malignancy, there is a much higher incidence of success in patients with malignancy (87.5%) as opposed to those with benign disorders (56%). The five patients in whom analgesia could not be obtained with percutaneous cordotomy were successfully treated with either open cordotomy or rhizotomy. There were no significant complications or operative mortality in this series.

### SELECTED CASE STUDIES

Case 1.: A 58 year old male who had been found to have non-resectable squamous cell carcinoma invasion of the superior vena cava and the posterior esophagus was admitted six months later with unrelenting, severe pain in the right

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lower extremity, pelvis, and back. Percutaneous cordotomy was performed with immediate analgesia to T-10 on the right, remaining until his expiration 36 days later. He was pain free and did not require narcotics after the cordotomy.

**Case 2.:** A 65 year old man had progressively increasing pain in the right hip and leg over an eight year period. A laminectomy six years prior had failed to provide relief and for approximately three years prior to admission the patient required the use of a walker to ambulate. In addition the patient was felt to be drug dependent on Glutethimide (Doriden — CIBA).

He was admitted with the diagnosis of intractable pain secondary to arthritis and malunion of a previous fracture of the right hip. Percutaneous cordotomy was performed with clinically documented loss of pain and temperature sensations over the painful area but the patient continued to offer subjective complaints of pain. Evaluation by his family physician two years later stated that the cordotomy had been effective to only a limited degree.

**Case 3.:** A 45 year old male with the diagnosis of reticulum cell carcinoma of the bone, skeletal muscles, and soft tissues of the left shoulder was admitted with severe pain in the left sacral region with radiation down into the left leg — felt to be due to metastatic lesion compressing the left sciatic nerve. The first percutaneous cordotomy failed to produce analgesia in the left leg even though the initial electrical stimulation had caused dyesthesia in that area. However, the patient stated that the pain in the left hip had subsided.

A second precutaneous cordotomy was performed two weeks later with complete relief of pain until the patient's death three months later.

### DISCUSSION

Although percutaneous cordotomy is not necessarily easier for the surgeon to perform than an open surgical cordotomy, it is simple for the patient. It does not require a general anesthetic or a period of wound healing. It appears to be safer than open cordotomy because the patient is not under an anesthetic and can be continuously tested for neurologic dysfunction. By the same token, serial testing can aid in securing the desired sensory loss.

Because of the simplicity to the patient, a percutaneous cordotomy can be offered to a much broader spectrum of patients than were thought to be candidates for open surgical cor-

dotomy. Thus, the terminal cancer patient can gain relief of pain with this procedure, without having to undergo the risk of general anesthetic. Only rarely in this day of modern methods of pain relief is it necessary to deprive a cancer patient of his faculties by heavy narcosis and sedation. The patients with cancer on whom we have performed percutaneous cordotomy have almost without exception wished they had sought aid earlier. The families have been happy and have not been burdened with caring for the altered personality of the narcotic addict. As a corollary it should be recognized that patients already addicted to narcotics will not obtain the desired effect from cordotomy. Rarely can the addict be weaned from his drugs once he has become dependent on them for pain relief.

Yet it is apparent from our series of cases that percutaneous cordotomy often will not relieve types of pain that have been known to be refractory to open cordotomy. The patient with amputation stump pain, some of the patients with multiple low back operations and arachnoiditis, thalamic pain, etc., were not consistently relieved with percutaneous cordotomy. Newer neuro-surgical techniques such as direct transcutaneous stimulation and dorsal column stimulation are now available in the treatment of these conditions, and at this early stage of evaluation appear to be of more benefit to these patients.

### CONCLUSION

The treatment of intractable pain by means of percutaneous cordotomy has been described and the results in a series of 17 patients have been reported. There was complete or satisfactory relief of pain in 71% of all the cases with greater pain relief of patients with malignancy (87.5%) than those with benign disease (56%). It is our conclusion that percutaneous cordotomy can be achieved with very small risk and a high incidence of immediate and long-term relief of pain. The procedure is particularly recommended for the relief of the unilateral pain of cancer.

### SELECTED REFERENCES

1. Mullan, Sean: Percutaneous Cordotomy for Pain. *Post-grad. Med.*, 45: June 114-118. 1969.
2. Mullan, Sean: Percutaneous Cordotomy for Pain. *The Surg. Clinics of North Amer.*, 46: 3-12. 1966.
3. Rosomoff, H. L., Sheptak, P., Carroll, F.: Modern Pain Relief: Percutaneous Cordotomy. *JAMA*, 196: 482-486 1966.
4. Rosomoff, H. L.: Bilateral Percutaneous Cervical Radiofrequency Cordotomy. *J. Neurosurg.*, 31: 41-46 1969.

# How to Outwit the Department of Radiology\*\*

A Talk By William J. Rhinehart, M.D.\*

subtitled

## HOW TO ACHIEVE MAXIMUM EFFICIENCY FROM THE X-RAY DEPARTMENT WITH MINIMAL PERSONAL IRRITATION

When the ophthalmologists first inquired about the possibility of my making this little talk, I was nonplussed concerning what subject could be of interest to such a distinguished group of *migrant* physicians and their guests. With the possible exception of dermatologists and psychiatrists, a radiologist has less to say to the ophthalmologists than to any other medical discipline. With the general surgeons, we can always attack their longstanding and cherished concept of "Use only a little bit of thin barium." With the urologists and their ilk, we can speak with considerable fervor for the importance of preparing the patient and against their false belief that only a natural bowel movement is *sacred*. I have long held the private thought that, as a lad, the urologists were punished for bad conduct by the parental administration of a whopping big dose of castor oil, and then banished to an outdoor privy, with snow and ice on the ground, to meditate upon his misconduct. I submit that this is the only reasonable explanation for his abhorrence for the use of any form of laxative. With a little mental change in direction and expanding this to a generality, I come to my profound philosophical thought for the year 1972, which is as follows: "We can put a man on the moon, but we still cannot properly cleanse the colon."

Returning to the question of a radiologist speaking to a group of ophthalmologists, their are only about three categories of topics: foreign bodies, fractures of the orbit, and orbital bone erosions by benign or malignant tumors. Any of these would require lugging along visual materials and scouting around to find view boxes or a projection system that would work on Swiss electricity.

The office practice of radiology is more amenable to personal attention to the individual patient and the referring physician. It is less an assembly line type of production that all too

frequently characterizes the hospital practice of radiology as it has evolved in our time. For this reason, I propose, if you will bear with me, to give you a bird's-eye view of the other side of the hospital x-ray requisition. From this thought, I derive my title of: "How To Outwit The Department Of Radiology."

With modern machine billing and computer control, the day of the hastily scribbled x-ray requisition has largely passed. It is common practice to use a multipartite, snap-out combined x-ray requisition, report form, and billing invoice. With the exception of the emergency room patient, most of these forms are headed up by the use of an embossed plate that gives all of the pertinent information concerning the individual patient. With an appropriate amount of luck, the correct plate will have been used for the correct patient, and it will be stamped properly in the space provided and not off-center so that it is only partly readable.

Next comes the part where the referring physician cannot escape a high degree of responsibility. As you know, it is customary for the physician to include a request for an x-ray examination amongst his admission or daily orders on the order sheet. Then, a ward clerk or some individual of the nursing staff, of varying degrees of knowledge of medical terminology or even of basic English, has the responsibility of transferring this order or orders to the x-ray requisition. Here is where I enter a plea for full legibility of writing (printing if necessary) and for specificity of what is desired. To paraphrase the remarks made about a computer: "If garbage goes in; garbage comes out." We see many strange and wondrous examples of examinations desired that are the result of the clerk's or nurse's well-intentioned efforts to decipher the physician's almost totally illegible scrawl. After years of trying, I can almost read Hank Pringos' handwriting, but I defy anyone to accurately interpret what Travis Wells writes on a chart.

Since I have a daughter that just entered the School of Pharmacy at the University of Arkan-

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\*\*Presented at the fall meeting of the Eye, Ear, Nose and Throat Section, Arkansas Medical Society, October 1972, in Switzerland.

sas Medical Center, I feel I have a certain proprietary right to retell the old story concerning the illegibility of physicians' handwriting. It seems that there was a social lioness in a certain town that mailed out engraved invitations for a fancy soiree she was planning to hold. At the bottom was the customary "R.S.V.P." She included on her mailing list a new doctor and his wife. The doctor's reply came back scribbled on a prescription blank, but for the life of her, she could not determine whether or not he was coming to her party. She was too embarrassed to call the physician and point blank ask him his intentions. And then inspiration struck her. It was common knowledge that pharmacists could always read a doctor's handwriting. So, the next day she visited her neighborhood drug store, presented the prescription blank to the pharmacist, and said:

"Can you read this for me?"

"Just a minute," he replied, and went around back where he was out of sight. Returning about five minutes later with a bottle of tablets, he said to the lady:

"That will be three dollars and eight-five cents, please."

The topic of specificity of the examination or examinations, and the questions you, as the referring physician want answered, are equally important. Let us assume that you are planning to operate upon a patient who is something less than a prime physical specimen. You would like a radiographic study of the chest for clearance of any serious pulmonary or cardiovascular condition. If you have no clinical information or suspicion of significant chest disease, your order on the order sheet should read something like: "Routine pre-operative chest x-ray." However, if there is a known or suspected problem, the order should read: "Pre-operative chest x-ray with the addendum of: hypertension; dyspea on exertion; persistent, non-productive cough; etc." By writing an order in this fashion, you have challenged the radiologist to consider the diagnostic possibilities and to give you some sort of "yea" or "nay" for your benefit and the benefit of your patient. In the absence of any pertinent clinical information, the radiologist is *not* challenged to use all of his talents. Being human it is all too easy to give the films a standard look and render a standard report, particularly if he is pressed for time or his thinking is distracted

by surrounding hubbub or noise. As a practical matter, if the radiologist is reading radiographs without pertinent clinical information and without prior films for comparison, the referring physician is definitely taking a small chance that his patient will not receive full value for the fee he will be charged. If the attending physician has alerted the radiologist, human nature being what it is, the radiologist will expend any reasonable extra time and effort to prove or disprove whether or not some vague shadow or combination of shadows is of clinical significance. One of the hardest things to learn in radiology, and knowledge that comes mainly with time and experience, falls in the category of borderlines of normal and the various classes of artifactual shadows that can occur all too frequently.

The specificity mentioned above should not extend to the point where you, as the clinician, attempt to tell the radiology department how to perform the desired examination. To do so is at least a mild insult to their intelligence and their knowledge of their field of medicine. In every well run department of radiology, there are established routines for all studies commonly done. As I have said before, the radiologist mainly needs to know what is the problem. For example, a request may be labeled only "Barium Swallow" with no other information given, but there are entirely separate and different routines for: 1) A suspected foreign body; 2) A hiatal hernia; or 3) A cardiac series for analysis of the size and shape of the chambers of the heart. And yet all three can be called a "Barium Swallow" or "Esophogram".

An exception to this rule would be where the clinician is legitimately trying to conserve the patient's money for good cause. One example would be where an incomplete study is done somewhere else, and the patient comes to your office clutching the radiographs of this inadequate study in his hand. Let us say you are interested in the cervical spine, searching for a cause for an obscure type of headache, and the outside films consist only of anteroposterior and lateral views of good diagnostic quality. Without oblique films, this is an incomplete examination. So you, the clinician, order oblique films *only* of the cervical spine on your patient. If you are smart, you will supply the radiologist with the outside films, so that he can give you a logical report of the entire examination. Although I

cannot guarantee it, customarily this is done without any supplementary charge to the patient, other than for the films obtained, since the patient has already paid for one prior study.

Ordinarily, an adequate radiographic examination of the chest consists of erect, posteroanterior and lateral views. As one of my associates, Turuer Harris, likes to say: "If you know you need a lateral view, you really don't need it." This is a mild exaggeration of a basic truth. However, in a young, healthy adult, it is common practice and good medicine to get only an erect, posteroanterior film as for a pre-employment or pre-college physical.

Let us now assume that you have a post-operative patient that has suddenly and strangely turned sour. Being a good physician, you write an order on the order sheet for a "Stat" x-ray of the chest with the further instruction that you be called immediately, as to the results of this chest x-ray, at such and such a telephone number. You go on about your business impatiently awaiting the telephone call, and . . . nothing happens. Parenthetically, let me tell you that at one time, there was a brother physician of ours, now deceased, that ordered *all* of his radiographic studies as "Stat" examinations. What he really meant was "at the earliest reasonably convenient time." So, the technologists used to laugh about "slow Stat exams" for Dr. X and "fast Stat exams" for all other physicians.

Persons with the very best of intentions are subjected to the influence of three fundamental laws, first expounded by King Cool O'Murphy in the 6th century A.D., that still apply today. These three laws are as follows:

1. Nothing is as simple as it seems.
2. Everything takes longer than it should.
3. If anything can go wrong, it will.

Right off the top of my head, I can easily think of at least six things that can go awry between the ordering of a radiographic study and the rendering of a report, either verbal or written. The first breakdown can be the failure to transcribe the order to an x-ray requisition blank and then to transmit the requisition to the radiology department promptly. As a matter of self-protection, many x-ray departments now have a time clock stamp, and the date and time of the receipt of the requisition and the dispatching of the report are recorded on the report.

To return to our subject, you have had no word on your "Stat" request, and the nursing

station solemnly vows that the requisition was dispatched promptly. The person you next need to contact is the individual in the radiology department serving in the job called "Coordinator" or the term I prefer is "Ramrod." During daytime hours on week days, this individual is frequently the assistant chief technologist. It is usually not the chief technologist, because he is too busy with plans and training, personnel, budgets, assorted meetings, etc. The "Ramrod" is always a senior technologist during ordinary working hours. Amongst other things, the Ramrod's duties consist of: receiving and classifying the requisitions, dispatching the orderlies for the patients, determining the priorities of which patient shall be done first, assigning the patient to a particular room for the examination, checking the completeness and adequacy of the radiographs obtained, seeing that a preliminary interpretation is given by one of the radiologists when requested, and returning the patient to his room or to the E.R. with or without the films of the study.

There are many entirely legitimate reasons for a delay in carrying out a requested examination. Let me give you a few examples. The machine and crew of one mobile or portable x-ray machines may be tied down in surgery while the crew of another portable unit is doing previously requested "Stat" examinations. In regularly scheduled work, several E.R. patients requiring multiple examinations, originating from only one automobile accident, can bring the routine work to a screeching halt for periods of up to one hour, even though the patients have already been brought down from their rooms for the scheduled studies.

Older persons, not able to be fully cooperative, require a greater effort and expenditure of time than someone who is fully cooperative. The natural tendency is to make the largest number of patients wait the least amount of time, even though the older, uncooperative patient is thereby delayed. This is particularly true if one knows from past experience that it is likely to take an additional ten to fifteen minutes to clean up the room after an unsuccessful barium enema.

Another cause for delay in rendering a report is trying to converse directly with the referring physician. If he is not scrubbed and not in transit from one place to another, he is usually conversing with someone else on another telephone line. My own particular pet peeve is for

a physician's office not to have enough telephone lines to transact the business of his office. A repeated busy signal is most disheartening to me. I usually give up after five or six spaced out attempts, and wait for the physician to call me. I have often had the thought that if it is difficult for me to reach him, how many potential patients he must be losing.

To return to our Ramrod, he really has one devil of a job. It is virtually impossible to please or satisfy all of the referring physicians and all of the referred patients all of the time. If you as an irate clinician call one of the radiologists to complain about the lousy treatment you and your patient have received, the probability is that he will have to hunt up the Ramrod to determine the true status of affairs in order to relay this information to you.

Let us next assume that you are awaiting the results of a routine radiographic examination. You come to the x-ray department. Your friendly radiologist is not immediately available to counsel with you about your patient. The films have either not yet been read, or the dictated report is still with the stenographer and not available. You have no choice but to interpret the films yourself. How do you go about it. The first thing you do is to make as rapid a check as possible for accuracy. My late father used to say that good x-ray technique consisted of meticulous attention to a bunch of *blank* little details. The *blank* is a six-lettered adjective that begins with an "s", ends with a "y", and contains two "t's". Indeed, a successful radiograph requires remembering sixteen different things to be carried out in some sort of proper sequence. The foibles of human nature combined with the necessity of training a fairly large number of student radiologic technologists means that a certain number of mistakes are going to be made.

The first thing you do is to be certain that the film envelope handed you shows the full and complete name of your patient plus other identifying information. With a cumulative x-ray card file, we have had a number of instances where two patients had almost but not quite the same name. Some years ago, when we were traveling to work at Arkadelphia, I well remember a grandfather, father, and grandson, all three of whom had an identical name. The only differentiating characteristic was the age. This is commendable for carrying on a family name, but it surely does mess up a simple filing system.

Next, you check the x-ray number and date on the films with the information on the film envelope. Believe me, it is the easiest thing in the world to insert films into the wrong film jacket, particularly if the films of more than one case are being looked at at the same time. The next checkpoint is to compare the film markings with other information in your possession for correct laterality of the part examined.

Not too long ago an elderly plaintiff received a substantial out-of-court settlement from a clinician because the wrong hip had been radiographed at the bedside for a suspected fracture. The hip examined had been reported as negative for fracture. It is not uncommon for the clinician to put on the requisition left instead of right or right instead of left. The technologist starts to examine the side requested only to observe by pain or swelling or to be told by the patient that the same area on the opposite side hurts. In this instance, a discrepancy between the film marking of the side examined and the hip requested to be studied was noted by the radiologist in his report, with the added suggestion that if there was any doubt, the examination would be repeated. The suggestion was not picked up by the clinician. Since the lady was a chronic complainer and her trauma had not been very substantial, she was discharged from the hospital some days later with an undiagnosed and untreated hip fracture. Subsequently, another physician did make the correct diagnosis. A suit was filed. The end result was that the malpractice insuror of our clinician had to pay.

Another important check point is to compare any old films of the same part of the body in the patient's film jacket with the current films. With our increasing number of geriatric patients, I have known individual patients who have repeatedly responded to a name not their own throughout the whole course of an examination. The technologist is supposed to check the patient's wrist identification band against the name on the requisition. Unfortunately, this also is not always done, and it is not infallible. A few months ago at the Mopac Hospital, an elderly and sick patient was brought to the hospital by a friend or relative, and admitted to the hospital under the name of an individual who was also a pensioner of the Mopac Railroad, but hale and hearty at the time. This error was not discovered until a discrepancy in the appearance of the chest between current and old films was noted by the

radiologist, and an investigation was begun. I never did learn what the reasoning was behind this masquerade, but it did occur.

Next, all four corners of every film should be carefully looked at, using a "hot light" if necessary, for any unsuspected abnormalities. Finally, at this point in time, you should be ready to carefully examine the current films. Whenever there is symmetry between the two sides of the body, carefully compare one side against the other. If you are the first physician to examine the films, and there is a strange and unexplained shadow, ask the technologist to repeat the same film, to better exclude a coincidental artifact.

Some clinicians have a conviction, not often publically expressed, that they can interpret the radiographs on their own patients as well or better than a qualified radiologist. They further feel that the radiologist's interpretations of the same films is an unnecessary reduplication of work costing their patient additional money. Insofar as intelligent film diagnosis requires correlation with clinical information which they possess and which they have not made available to the radiologist, they have a valid point. There are many arguments against this mode of thinking, but I will mention only two.

The first is that it is all too easy to subconsciously interpret radiographs to make them agree with a clinical impression previously established. If for no other reason, an independent interpreta-

tion makes good medical sense. The second reason is that clinical specialists tend to have the "tunnel vision" of their specialty. Genitourinary surgeons look primarily at GU organs. Orthopedic surgeons look at bones, joints, and surrounding soft tissues, and know comparatively little about variations of normal or abnormal viscera or lung bases that might be included on the films obtained. I could give you other examples.

Let me bring these remarks toward a close by relating a bit of philosophy concerning personal conduct that was taught to me by my later stepmother some years ago. It goes something like this:

"Always be sweetly reasonable when things are going well. If progress stops, pause and reconsider your position carefully and objectively. If you are positive that you possess all of the facts and that your position is absolutely correct, then start raising *HELL*."

I trust that in the last twenty minutes or so I have given you some small insight into the production side of the x-ray requisition as contrasted to the ordering side. The best way to "Outwit The Department of Radiology" and to confound them is to give them your complete and full co-operation and understanding, and to expect them to respond in kind.

Thank you.



#### **Immunotherapy for the Patient With Cancer**

L. J. Humphrey et al (Emory Univ, Atlanta 30304)

*Ann Surg* 173:47-54 (Jan) 1971

Fifty-eight patients with disseminated cancer have been treated by immunotherapy. An acellular tumor vaccine was injected over four weeks and then paired patients exchanged plasma and white blood cells for eight mornings. Of 38 patients evaluated, eight had an objective response. Pre- and post-immunization sera were tested against primary human cell cultures for cytotoxic activity. Sera tested from six of the clinical responders showed cytotoxic activity while only 16 of 28 sera tested from nonresponders showed activity. These data show that men can react immunologically against cancer.

#### **Latex Agglutination Test for Invasive Amebiasis**

M. N. Morris, S. J. Powell, and R. Elsdon-Dew  
Institute for Parasitology, Durban, South Africa)

*Lancet* 1:1362-1363 (June 27) 1970

A simple and rapid latex agglutination test as an aid in the diagnosis of invasive amebiasis was evaluated in five groups of 100 individuals each, from an endemic area. Results were positive in 98 patients with amebic liver disease, 96 with amebic dysentery, 15 African general medical patients, and five African blood donors, but not in any of the European blood donors. Material for the test may be prepared in a central laboratory and distributed as a kit which requires little skill or equipment to operate.

# Brain Tumor or Cerebrovascular Accident?

Surinder Gupta, M.D.\*; Warren C. Boop, Jr., M.D.\*\*, and Stevenson Flanigan, M.D.\*\*\*

**N**eurology is an exacting science; no other branch of medicine lends itself so well to the correlation of signs and symptoms with diseased structure as does neurology (DeJong<sup>1</sup>). For this, a knowledge of neurophysiology, neuroanatomy and neuropathology is necessary. "Brain tumors" is a large group of diseases affecting the brain and its coverings; however, they often fail to present the classic general triad of headache, nausea, and papilledema. They are often silent until the patient suffers a so-called "stroke" or a seizure. The purpose of this paper is to analyze brain tumor cases admitted to the University of Arkansas Medical Center and the Little Rock Veterans Administration Hospital during the years 1969 and 1970, with reference to the mode of initial presentation and with particular emphasis on those cases which were admitted as cerebrovascular accidents.

A total of 82 charts from both hospitals were selected with verified diagnosis of brain tumor. The diagnosis in seven of these cases was not verified histologically, although a definite diagnoses of brain tumor was confirmed with ancillary studies. These patients had either refused operation or were subjected to radiotherapy. Three of these seven cases were suffering from pituitary tumors and four had multiple intracranial metastasis with known primary.

Six other patients died before any diagnostic procedures could be carried out and in these cases a diagnosis of brain tumor was made at

autopsy. Two of these were from the State Hospital carrying a diagnosis of mental illness, two were admitted as cerebrovascular accidents and expired within 48 hours. The other two were on the Surgical and Urological Services, suffering from carcinoma of the lung and carcinoma of the bladder. A detailed analysis of the 82 cases follows.

Thirty-three (33) patients were admitted as brain tumors. Nine patients were admitted with "seizures" as the basis for hospitalization; thirty (30) were admitted as cerebrovascular accidents. Among those 30, gliomas were the most common tumors presenting as cerebrovascular accidents; metastatic tumors were the next most common. Of the latter group eight of these cases presented without the suspicion of a primary tumor, prior to admission. In the rest, the history of a primary tumor was not obtained at the time of admission because the diagnosis of cerebrovascular accident seemed too apparent.

The Neurology Service admitted the largest number of patients, eight of which reflected the provisional diagnosis of brain tumor. Most of the others entered that service with the diagnosis of a cerebrovascular accident. Nineteen patients were admitted to services other than neurology and neurosurgery. Consultation was obtained in these nineteen cases an average of 10 days after admission.

Gliomas were the most frequent tumors, making up 40.5% of all tumors. This is comparable

TABLE 1 — ADMITTING DIAGNOSES

	Brain Tumor	Seizure	Cerebro-Vascular Accident	Miscellaneous	Total
Metastasis	9	2	12	4	27
Glioblastoma	3	3	10	3	19
Astrocytoma	4	2	6	0	12
Pituitary Tumor*	5	0	0	1	6
Meningioma	2	2	0	2	6
Acoustic Neuroma	3	0	0	0	3
Chordoma	2	0	0	0	2
Ependymoma	2	0	0	0	2
Oligodendrogloma	1	0	1	0	2
Others	2	0	1	0	3
TOTAL	33	9	30	10	82

\*3 cases were not histologically verified.

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to earlier series (Cushing<sup>2</sup>, Grant<sup>3</sup>), if metastatic tumors are excluded. In this series metastatic tumors accounted for 33.5%, a large percentage. This is likely due to the inclusion of the Veterans Administration Hospital cases where the patients are usually of an older age group and are mostly males. Again, the sex incidence of 66% males to 34% females is also weighted because of the predominately male population at the Veterans Administration Hospital. The

largest number of cases were in the 5th decade (22), followed by the 7th decade (16), 4th decade (14) and 6th decade (13). This age incidence is not much different from other series.

The average duration of symptoms for all tumors was four months, the longest average being two years for pituitary tumors, the shortest average duration occurred with metastatic tumors, 15 days. Localizing signs were present in 53 patients. These consisted of paresis, per-

**TABLE 2 — SERVICE TO WHICH ADMITTED**

	Neurosurgery	Neurology	Surgery	Psychiatry	Medicine	Others	Total
Metastasis	6	14	3	1	2	1	27
Glioblastoma	2	12	1	2	1	1	19
Astrocytoma	4	7	0	0	1	0	12
Pituitary Tumor*	2	1	0	0	1	2	6
Meningioma	1	2	1	1	0	1	6
Acoustic Neuroma	2	1	0	0	0	0	3
Chordoma	2	0	0	0	0	0	2
Ependymoma	1	1	0	0	0	0	2
Oligodendrogloma	1	1	0	0	0	0	2
Others	2	1	0	0	0	0	3
<b>TOTAL</b>	<b>23</b>	<b>40</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>82</b>

\*3 cases were not histologically verified.

**TABLE 3 — TYPE OF TUMOR, AGE & SEX**

Type of Tumor	No.	%	Age							M No.	M %	F No.	F %	
			1-10	11-20	21-30	31-40	41-50	51-60	61-70					
Metastasis	27	33.5	0	0	1	6	8	7	4	1	13	48	14	52
Glioblastoma	19	23.5	0	2	0	4	4	3	5	1	15	79	4	21
Astrocytoma	12	15	0	2	3	1	3	2	1	0	9	75	3	25
Pituitary Tumor	6	7.5	0	0	0	1	1	0	3	1	3	50	3	50
Meningioma	6	7.5	0	0	0	0	4	0	2	0	4	66	2	34
Acoustic Neuroma	3	3.8	0	1	0	1	0	0	1	0	2	66	1	34
Chordoma	2	2.3	0	0	1	0	0	0	1	0	1	50	1	50
Ependymoma	2	2.3	1	1	0	0	0	0	0	0	2	100	0	0
Craniopharyngioma	1	1.5	1	0	0	0	0	0	0	0	0	0	1	100
Hemangioblastoma	1	1.5	0	0	0	0	1	0	0	0	1	100	0	0
Sarcoma	1	1.5	0	0	1	0	0	0	0	0	1	100	0	0
Oligodendrogloma	2	2.3	0	0	0	1	1	0	0	0	2	100	0	0
<b>TOTAL</b>	<b>82</b>	<b>100</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>14</b>	<b>22</b>	<b>13</b>	<b>16</b>	<b>3</b>	<b>53</b>	<b>66</b>	<b>29</b>	<b>34</b>

**TABLE 4 — CLINICAL DATA**

Diagnosis	Avg. Duration of Symptoms	Localized Signs		Papilledema		?
		+	--	+	-	
Glioblastoma	32 days	10	9	13	4	2
Metastasis	15 days	21	6	25	1	1
Astrocytoma	3 months	8	4	6	5	1
Meningioma	1 year	3	3	0	5	1
Pituitary Tumor	2 years	5	0	0	5	0
Acoustic Neuroma	6 months	2	1	0	3	0
<b>ALL TUMORS</b> (including others)	4 months	49	23	44	23	5

## BRAIN TUMOR OR CEREBROVASCULAR ACCIDENT?

sonality changes, visual field changes, sensory symptoms and/or focal seizures. Papilledema was present in nearly two-thirds of the patients.

Brain scans and angiograms were the most helpful procedures in reaching the diagnosis of brain tumor. In pituitary tumors, acoustic neuromas and tumors of the posterior fossa, air studies were the most helpful. Out of 37 EEG's performed, 20 were abnormal. Plain x-rays of the skull were positive only in 17 out of 77 cases. CSF examination was done in only 20 cases and it was abnormal in six cases.

A separate comparative breakdown of scans and angiograms (Table 6) revealed some interesting facts. Both scans and angiograms were positive in 54 cases and falsely negative in only 3 cases. In four cases angiograms were positive despite negative scans, while there were 11 cases in which the opposite was true.

### DISCUSSION

A limited review of this sort is useful mostly to lend direction to those who are making the review. An earlier article in the Journal of the Arkansas Medical Society on subdural hematomas disclosed an uncommon use (or misuse) of the diagnosis of cerebrovascular accident. It prompted the inquiry outlined in this presentation. Here again it is apparent that caution must be exercised in the untested diagnosis of a cerebrovascular accident. Early symptoms of cerebral

dysfunction associated with the presence of a space occupying lesion are often excused by patient, family and physician. Ironically, the recognition of "transient ischemic attacks" in the anamnesis of a cerebrovascular occlusive "stroke" has fostered unjustifiable complacency in the history of similar symptoms taken from a patient with a brain tumor.

It is fortunate that favorable consideration can also be offered with surgical intervention for the transient ischemic attacks of cerebrovascular disease. These symptoms should lead to an angiographic evaluation of the patient, and even more commonly a brain scan. The latter can be done on an outpatient basis and as a screening device warrants application as often as consideration of any cerebral dysfunction is entertained. Angiography still carries some risk and to some extent the difference between diagnostic consideration of transient ischemic attacks as opposed to a brain tumor dictates variations in the technique of the study. Short of the need for urgent intervention all cerebral angiographic studies should be preceded by neurological evaluation and a technically satisfactory brain scan.

These comments are not to the exclusion of the diagnostic value in plain x-rays of the skull and, for that matter, an x-ray of the chest. The lumbar puncture is useful primarily to the diagnostic exclusion of a subarachnoid hemor-

**TABLE 5 — DIAGNOSTIC INVESTIGATIONS**

Diagnosis	X-ray Skull	Brain Scan	Angiogram	Air Study	EEG	LP
	# + —	# + —	# + —	# + —	# + —	# + —
Metastasis	25 2 23	23 20 3	26 24 2	4 2 2	14 6 8	3 1 2
Glioblastoma	18 1 17	17 16 1	17 15 2	0 0 0	11 6 5	1 0 1
Astrocytoma	12 0 12	11 8 3	12 9 3	4 3 1	6 4 2	4 1 3
Meningioma	6 3 3	6 5 1	5 5 0	1 1 0	5 3 2	1 0 1
Acoustic Neuroma	3 1 2	3 3 0	3 1 2	3 2 1	0 0 0	3 2 1
Pituitary Tumor	6 6 0	6 5 1	4 2 2	4 3 1	0 0 0	3 0 3
Chordoma	2 1 1	2 1 1	2 1 1	2 2 0	0 0 0	2 0 2
Ependymoma	2 0 2	2 1 1	2 1 1	2 2 0	0 0 0	2 1 1
Craniopharyngioma	1 1 0	1 1 0	0 0 0	0 0 0	0 0 0	0 0 0
Miscellaneous	2 2 0	2 1 1	2 0 2	2 1 1	1 1 0	1 1 0
TOTAL	77 17 60	73 61 12	73 58 15	22 16 6	37 20 17	20 6 14

**TABLE 6 — ANGIOGRAM: BRAIN SCAN**

Tumor	Scan			Angiogram			Both	Both	Angiogram +	Scan +	Angiogram —
	No.	+	—	No.	+	—					
Glioblastoma	17	16	1	17	15	2	15	1	1	2	2
Metastasis	23	20	3	26	24	2	23	0	0	2	2
Astrocytoma	11	8	3	12	9	3	7	1	2	2	2
Meningioma	6	5	1	5	5	0	2	0	0	1	1
Pituitary Tumor	6	6	0	4	2	2	2	1	0	1	1
Miscellaneous	10	6	4	9	3	6	5	0	1	3	3
TOTAL	73	61	12	73	58	15	54	3	4	11	11

rhage or meningitis. It should otherwise be deferred to the more general neurological evaluation. Clinical psychological testing and electroencephalography are extremely useful tools in the serial evaluation of patients with cerebral dysfunction. They are not particularly helpful in a preliminary diagnostic survey.

In summary, it is the intent, with this review to advise that full differential diagnosis be exercised in the evaluation of any patient whose brain is not working properly. Nearly 40 percent of these tumor victims were admitted to the

University and the Veterans Administration Hospitals as cerebrovascular accidents.

#### REFERENCES

1. DeJong, Russel N.: The Neurological Examination, Hoeber, 1967, p. 7.
2. Cushing, H.: Intracranial Tumors, Springfield, Ill. Charles C. Thomas, 1932, 150 pp.
3. Grant, F. C. and Sayers, M. P.: Notes on a Series of Brain Tumors, J. Neurosurg. 8:510-514, 1951.
4. Boop, Warren C., Jr., Flanigan, Stevenson, and Gupta, Surinder: Chronic Subdural Hematomas Mimic Cerebrovascular Accidents. The Journal of the Arkansas Medical Society, 68:232-234, 1972.



### Nicotine Effects on Alveolar Macrophage Respiration and Adenosine Triphosphatase Activity

D. H. Meyer et al (M. G. Mustafa, Univ of California School of Medicine, Davis 95615)  
*Arch Environ Health* 22:362-365 (March) 1971

Pulmonary alveolar macrophage cells (PAMs) manifest a high endogenous respiration ( $0.16\mu\text{mols/liter of O}_2/\text{mg of protein/sec}$ ) and a  $\text{Mg}^{++}$  dependent  $\text{Na}^+/\text{K}^+$  stimulated adenosinetriphosphatase (ATPase) activity at the cellular level ( $2.2\mu\text{mols of phosphate/mg of protein/hr.}$ ) Nicotine adversely affected the PAM respiration and ATPase systems. Concentrations above 0.5 millimols/liter inhibited PAM ATPase activity; a 33% inhibition occurred at 5 millimols/liter of nicotine. Preincubation exposure of PAMs to nicotine for one to two hours deteriorated the ATPase system further; a 50% to 60% inhibition occurred at 5 millimols/liter of nicotine. Low concentrations of this alkaloid (<5 millimols/liter) stimulated cell respiration by 20%; high concentrations (>10 millimols/liter) were inhibitory. Preincubation of cells for one to four hours in the presence of 0.1 to 5.0 millimols/liter of nicotine caused abolishment of biphasic response and greater respiratory inhibition.

### Bacteria and Etiology of Cancer of Large Bowel

M. J. Hill et al (R. E. O. Williams, St. Mary's Hosp Medical School, London)  
*Lancet* 1:95-100 (Jan 16) 1971

The geographical variations in the incidence of carcinoma of the colon seem to be correlated with variation in the fat content of the diet. It was postulated that intestinal bacteria might be able to produce carcinogens from dietary fats or from bile steroids, and that the variations in the incidence of colon cancer might depend partly on differences in the composition of the intestinal bacterial flora brought out by the differences in diet. Samples of feces from six groups were examined for their content of bacteria and steroids. Feces from people in Britain and the United States, where the incidence of colon cancer is high, had higher counts of *Bacteroides* and lower counts of enterococci and other aerobic bacteria than feces from people in Uganda, South India, or Japan, where the incidence of the disease is low. Feces from people in the "western" countries contained higher concentrations of steroids than those from the African and eastern countries, and the steroids were also more degraded. The results are consonant with the thesis that the intestinal bacteria may be etiologically related to cancer of the colon.

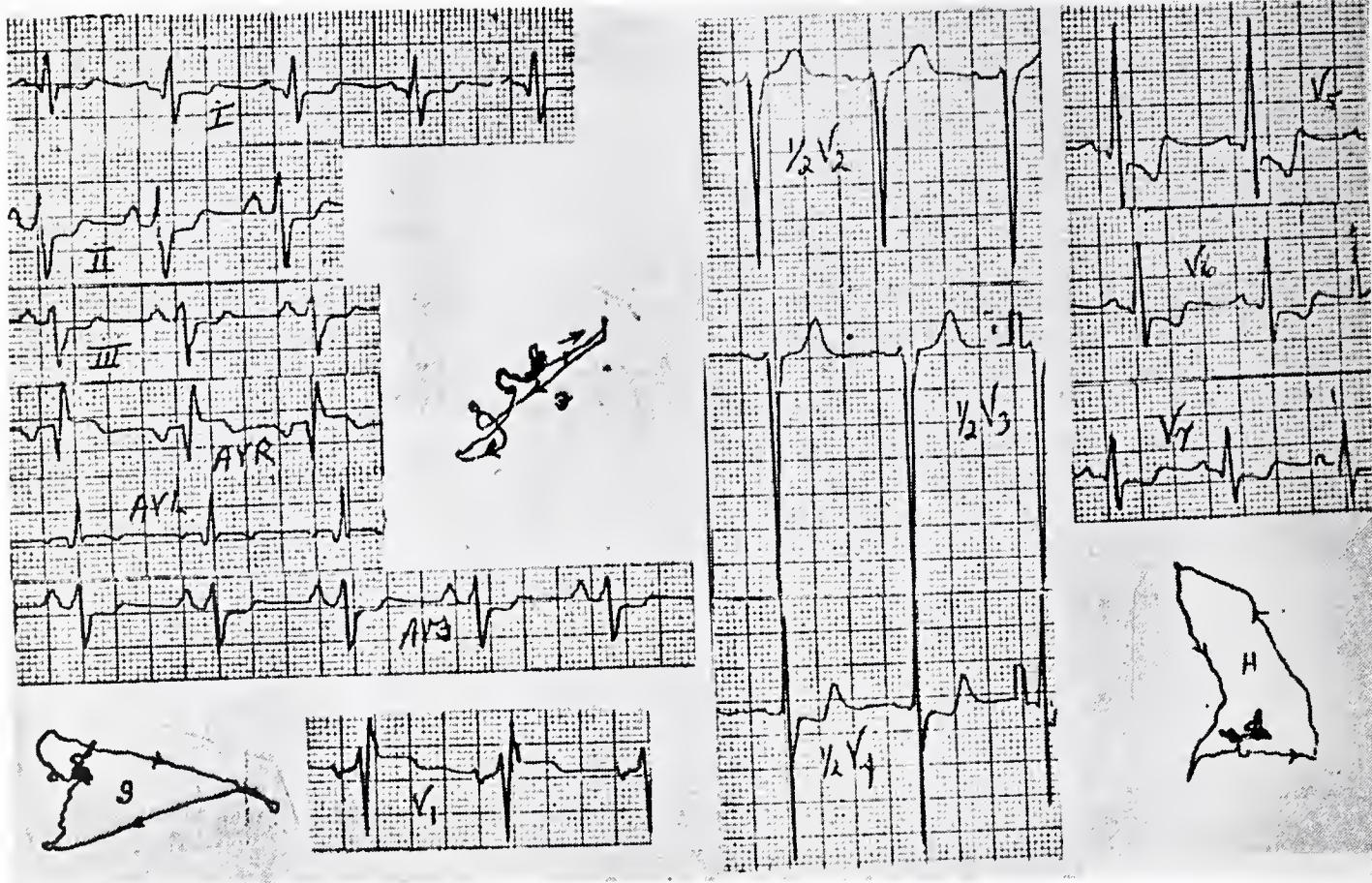
# ELECTROCARDIOGRAM

# OF THE MONTH



The Department of Cardiology, University of Arkansas Medical Center

(See Answer on Page 404)



42-year-old white male with loud systolic murmur. Father died age 47 years after several years history of cyanotic syncopal spells.

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## Leptospirosis in Arkansas 1972

Harvie R. Ellis, D.V.M.\*

**L**eptospirosis is described as one of the world's most widespread zoonosis. The disease affects man and a wide variety of animal species. The animal cases may be potential reservoirs of the causative agent and likely sources of further propagation. This infection has been a serious economic livestock problem in Arkansas for a number of years.

Leptospirosis is caused by a spiral-shaped organism belonging to the spirochetes, which are often grouped with bacteria and at other times with protoza. However, because of the close resemblance to organisms that are definitely bacteria, they are usually regarded as bacteria. Even though the many different serotypes possess similar structural characteristics they are pathologically different.

The incidence and spread of leptospirosis among domestic animals is hastened by overcrowding on muddy, dirty, humid, hot, and insanitary pens or pastures. The addition of infected animals to herds maintained under such conditions or to clean herds, will only serve to compound the problem. The most common mode of transmission of the disease is by way of urine, contaminated feed, and water. The farm pond is becoming an increasing hazard in the spread of leptospirosis because infected animals of many species have access to it.

The most important sources of leptospiral infections are the long-term animal carriers which shed the organisms from the kidneys without showing clinical symptoms.

The syndrome of leptospirosis is basically the same in both man and animals. For example, the infection often affects the liver and kidneys in human and animal patients. Other common manifestations are conjunctivitis and possible icterus condition of mucous membranes.

Leptospirosis in cattle usually presents varied clinical symptoms. Fever appears in one to two weeks after the infection is introduced and lasts four or five days. The disease may progress on a rapid course, develop gradually, or remain clinically inapparent. Other early obvious symptoms are depression, general weakness, loss of weight, and oftentimes a watery diarrhea will exist. The acute form presents a change in the blood picture with a rapid fall in the hemoglobin index along with hemoglobinuria and hemoglobinuria. In cattle heavy with calf, abortion may occur about the middle of the onset.

Swine are very easily infected with leptospirae organisms but they may present few symptoms following infection. Leptospirosis in swine can be misleading in that seemingly healthy animals may shed enormous number of leptospirae in the urine for long periods of time, thus such animals are very dangerous carriers to other domestic animals and man.

Leptospirosis in dogs is a very common disease in most areas of Arkansas. It appears that the practice of modern veterinary medicine in small animal clinics has had a decided influence on the incidence of canine leptospirosis. This situation has been brought about by early diagnosis and treatment as well as preventive vaccine injections. In canine cases where leptospirosis remains untreated, it is very destructive and may follow an acute, subacute, or chronic course.

In cats, leptospirosis is seldom identified, the feline species appears to have a natural resistance to the infection.

Leptospirosis is a disease of lower animals and the most important members of this group belong to the rodent family. The literature lists these important wildlife hosts as being the rat, raccoon, striped skunk, and opossum.

In man, the symptoms of leptospirosis begin about a week or ten days following exposure and

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## ARKANSAS PUBLIC HEALTH AT A GLANCE

include fever, headache, chills, malaise, vomiting, muscular aches, and conjunctivitis. Leptospirosis has been described as one of the causes of aseptic meningitis syndrome. If a severe case of human leptospirosis develops, with jaundice and renal insufficiency, the outcome may be fatal. However, most leptospiral infections are not severe and end up without complications even in untreated patients.

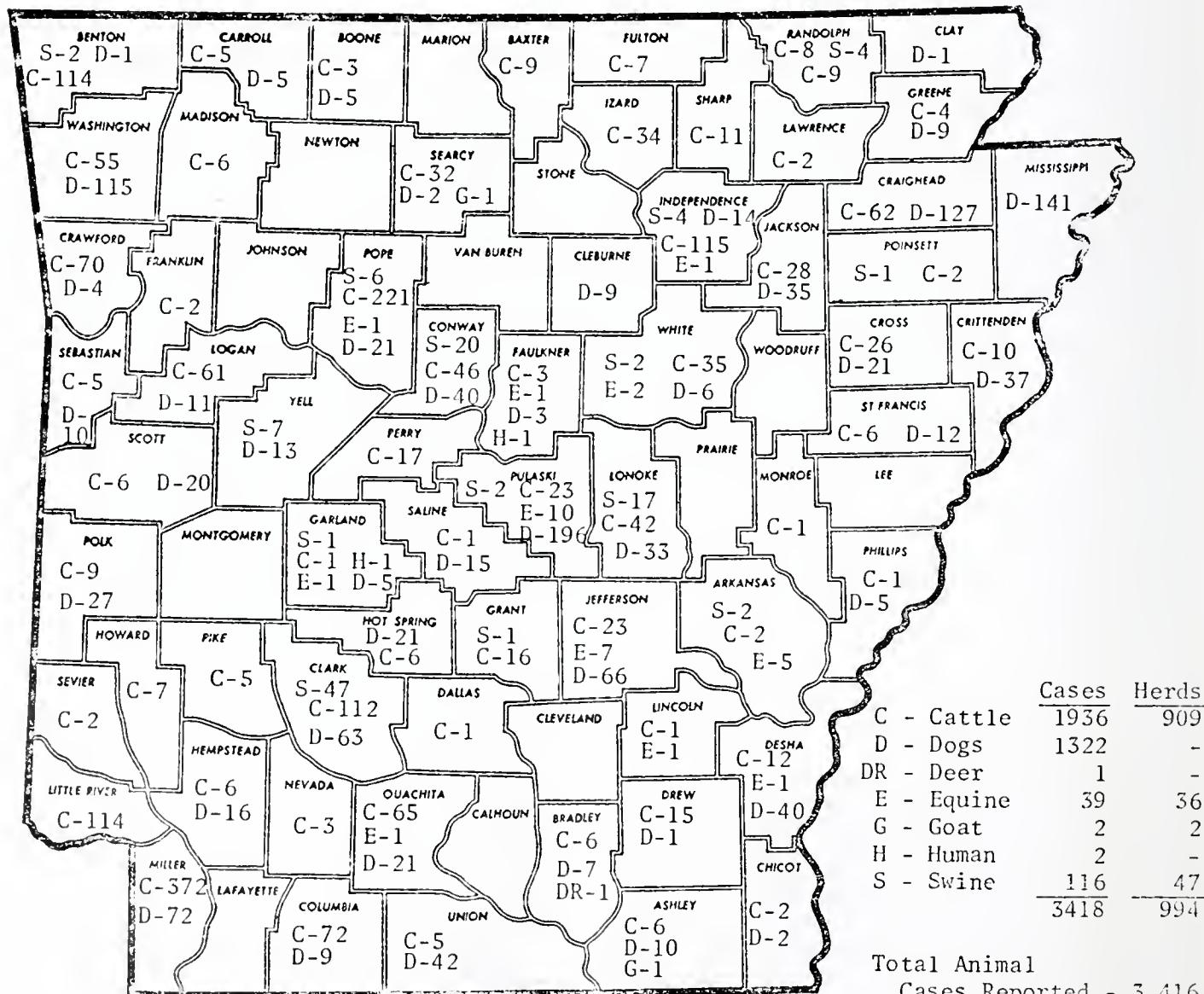
Confirmation of a clinical diagnosis of leptospirosis is usually obtained by agglutination tests of the patient's serum. Cultures on blood or urine may be performed in well-equipped laboratories, staffed with specially trained technicians.

Leptospirosis is generally accepted as being an occupational disease in rice field workers, cane cutters, swine herdsmen, cattle producers,

abattoir workers, sewer workers, and veterinarians. Pastime activities, such as swimming in polluted waters (stockponds) is a source of leptospiral infection for teenagers in the summer months.

A vaccine has been developed for animals that is reported to be reliable and in general use in the United States. There is no effective immunization available for human use. Therefore, prevention of the disease in the human population depends on avoiding exposure to animal urine. In areas where leptospirosis is a potential hazard, protective equipment should be used, if at all possible, by the workers. A look at the map of Arkansas which tabulates the reported leptospirosis cases by species, in 1972, indicates how widespread the infection is in the state. Thus, the opportunity to acquire the infection, by man, is much greater than normally anticipated.

### LEPTOSPIROSIS IN ARKANSAS 1972





## EDITORIAL

# Urologic Problems in Children

John F. Redman, M.D.\*

The significant point about pediatric urologic problems is that more often than not they are overlooked. The key to this situation is knowing when to investigate the genitourinary tract further. The responsibility for the knowledge lies with every physician who examines children.

It is important to know what constitutes a basic urologic examination and what conditions warrant this examination.

As is traditional, the initial step in the examination is the taking of the history. Pertinent inquiries should be made. Does the child have enuresis, or does he have enuresis which was occurred after completion of toilet training? Has there been indication of a failure to thrive? Has there been a persistent or intermittent abdominal pain or recurring nausea, vomiting, or diarrhea? Has there been fever which was unexplained? Has there been painful or frequent urination? Does the urinary stream seem small, or does the child strain to void? Has there ever been any blood noted with urination or on the underclothes? Have his relatives as children ever been treated for a urinary tract infection? Has there ever been any drainage from the umbilicus?

The physical examination should begin with the head noting if abnormalities such as hypertelorism or low set ears are present. The abdomen should be palpated carefully giving attention to the renal and bladder areas. In the male the penis should be examined. Is the phallus straight? Does the urethral meatus exit at the tip of the organ, or is it in any way proximal to the end of the penis? The testicles should be palpated and their position ascertained to be dependent in the scrotum. In the female the

vulva should be inspected for any abnormality. The back should be examined for any sign of myelodysplasia including a patch of hair over the sacrum. The anal sphincter tone should be determined. The singularly most important examination is the urine analysis. The value of the analysis is largely dependent on the care taken in collection of the urine for study. In male children of all ages a clean catch urine should be possible. In females a urine containing bacteria should be confirmed by catheterization prior to treatment. Catheterization may be easily done using a #5 feeding tube. Finding the meatus is often facilitated by drawing down on the anterior lip of the introitus with a cotton applicator. Ideally, the urine should be examined by the physician himself taking note of white and red blood cells, bacteria, and casts. The addition of a drop of methylene blue to the sediment aids in identification. A urine culture should be submitted.

The second most important examination is the excretory urogram. The dosage of the injection of the contrast media is usually determined by the weight of the child. A plain film of the abdomen is imperative to injection of the contrast media. Radiographic exposures are usually made at three, eight and fifteen minutes following injection.

A third important examination is the cystogram which is often done with the patient voiding. A plain film is made of the abdomen, and then contrast media is instilled by gravity. A radiographic exposure is made with completion of filling, and then the patient is placed in an oblique position and an exposure is made with the patient voiding. By definition, reflux is noted if contrast media enters the ureters or upper tracts.

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Debate has arisen over who should perform the radiographic contrast studies. The well founded controversy centers around overexposure of the patient and failure to protect the gonads. Attention to detail and some basic radiologic training is a must for those who would undertake to do this examination.

What children deserve a further urologic evaluation? Remember that genitourinary tract pathology is often occult in children. The child with seemingly minimal symptoms may have marked damage. (Fig. 1, 2)

Children with urinary tract infection require further evaluation. The adage is well accepted that one urinary tract infection in a male and two infections in a female deserve further evaluation. It is submitted that one significant urinary tract infection in any child should be investigated further. Asymptomatic bacteriuria identified on routine examination also constitutes an infection. Consideration of cystoscopy should be given to the children in whom reflux is demonstrated and to girls with recurrent infections.

Enuretic children should be given attention particularly if they are six years of age and older or if they have a recurrence of enuresis following an extended period of being dry at night.<sup>1</sup> Daytime wetting, in conjunction or alone, should also be given attention. Above all, medication should not be given to control enuresis until pathologic causes have been ruled out.

Children with undiagnosed abdominal pain deserve further evaluation, particularly the small child who is unable to recount symptoms and in whom no overt cause can be found. Many are the tales of ureteropelvic junction obstruction in children who were treated for years for intermittent "belly aches". Persistent diarrhea, vomiting and failure to thrive in the child under one year of age may be indicative of urinary pathology.<sup>2</sup>

Urinary tract pathology should be considered in children with fever exhibiting no otherwise demonstrable causation.

Any child with a palpable abdominal mass deserves urologic evaluation.<sup>3</sup>

Blood in the urine, even that which is noted



Figure 1.

Six year old boy referred with chief complaint of daytime wetting. Intravenous pyelogram shows marked dilatation of the upper tracts. Note thinning of the cortex on right.



Figure 2.

Cystogram showing heavy trabeculation and diverticula. Final diagnosis: prostatic valves.

only microscopically, should be considered an indication for evaluation of the urinary tract.<sup>4</sup>

Children with congenital anomalies should have an evaluation of the genitourinary system because of the associated high incidence of genitourinary tract anomalies. Some specific indications are congenital heart disease, external ear anomalies, myelodysplasia, undescended testes after age five, and hypospadias.<sup>5,6</sup> (Fig. 3, 4)

Children with a history of spinal cord trauma or disease which might result in a neurogenic bladder deserve a urologic evaluation.

### Summary

It is emphasized that correctable lesions of the genitourinary tract in children are frequently undiagnosed. An increased rate of correct diag-

noses will result if physicians who examine children will be alert to the stigmata of occult genitourinary disease.

### REFERENCES

1. Mahoney, D. T.: Studies of Enuresis. I. Incidence of Obstructive Lesions and Pathophysiology of Enuresis. *J. Urol.* 106:951-958, 1971.
2. Tsingoglou and Dickens, J. A. S.: Lower Urinary Obstruction in Infancy. A Review of Lesions and Symptoms in 165 Cases. *Arch. Dis. Child.* 47:215-217, 1972.
3. Wedge, J. J.; Gracefeld, J. L.; and Smith, J. P.: Abdominal Masses in the Newborn. *J. Urol.* 106:770-775, 1971.
4. Harrison, W. E.; Habib, H. N.; Smith, E. I.; and McCarthy, R. P.: Non-Traumatic Hematuria in Children. *J. Urol.* 96:95-100, 1966.
5. Bors, E. and Connai, A. E.: Neurological Urology. University Park Press, page 200, 1971.
6. Neyman, M. A. and Schirmer, H. K. A.: Urinary Tract Evaluation in Hypospadias. *J. Urol.* 94:439, 1965.



Figure 3.  
Four year old boy referred because of coronal hypospadias. Intravenous pyelogram shows upper tract obstruction on right and a pelvic kidney as outlined by arrows on left.



Figure 4.  
Retrograde pyelogram on right showed the area of obstruction on right to be at the level of the lower ureter. Exploration showed the obstruction to be due to a persistent umbilical artery.



## M E D I C I N E   I N   T H E



### THE MONTH IN WASHINGTON

The American Medical Association took to Congress its protest against retention of controls over physicians in phase III of the economic stabilization program.

In a statement to the Senate Committee on Banking, Housing and Urban Affairs, which was considering a one-year extension of statutory authority for the program, the AMA cited the "highly discriminatory" treatment of physicians and other health care providers under the program despite their cooperation and "laudable record of self-restraint."

"We have questioned the wisdom of many of the policies which have been initiated in the various regulatory phases since August of 1971," the AMA statement said. "In particular, we have objected to certain aspects because of the highly discriminatory treatment accorded health care providers. This discrimination has been even heightened under phase III of the Administration's program. On January 11, 1973, mandatory wage and price controls were suspended for most sectors of the economy but were continued to be enforced upon health care providers. Our opposition to this discrimination does not stem from self-interest, nor is it based solely upon invidious comparison with those segments of the economy no longer subject to mandatory control. The question we raise here is more fundamental. It is submitted that the capricious imposition of controls on select groups only serves to frustrate the basic objectives of the stabilization program itself. If regulation is to be effective, it must recognize the interrelationships existing within the economy in general. Without such accomplishment the intent of the law will be frustrated.

"Physicians' fees constitute a relatively small percentage of the gross national product (less than 1.5%) and they constitute a small factor in the consumer price index weighting structure (less than 1.8%). Given the relatively slight impact of this factor upon the economy as a whole,

the suspension of mandatory controls would not work counter to the goals of the economic stabilization program. Conversely, continued controls could not be expected to yield meaningful restraints throughout the balance of the economy. The continuation of mandatory controls, therefore, does not appear to be consistent with the letter or spirit of the economic stabilization act.

"The Congress found in enacting the economic stabilization act that prompt judgments and actions by the executive branch of the government were necessary to meet extreme economic fluctuations. The Congress, however, directed the President to conduct such emergency programs in a fair and equitable manner and to make such adjustments as may be necessary to prevent gross inequities. Standards established under an emergency program must comply with the criteria of section 203 (b) of the act which provides, among other things, that such standards shall be "generally fair and equitable" and that the program must call for "generally comparable sacrifices by business and labor as well as other segments of the economy."

"We emphasize that this statutory authority presumes the existence of an economic emergency and authorizes a coherent and comprehensive governmental response. Only a system of price stabilization effective at all levels of production and consumption and having equitable incidence within the economy should be countenanced. To invoke controls for one activity without the reasonable expectation of achieving a result having universal application is to employ the statute in a punitive manner. Punitive treatment of health care professionals is neither sanctioned by law nor warranted by the record.

"It is apparent from the physician component of the consumer price index that the medical community has fully complied with efforts to curb inflation during phase I and II of the new economic policy. In the period from August

1971 to December 1972 the all items category, as measured by the consumer price index, rose at a rate of 4.2%, the all services component at the rate of 4.6%, while physicians' fees rose only 3.2%. In the period from November 1971 to December 1972 (i.e., during the 14 months of phase II) the all items category rose 3.8%, the price of all services rose at a rate of 3.8% while physicians' fees rose at a rate of 2.6%. For the calendar year 1972, physicians' fees increased only 2.1%. This percentage is below the 2.5% annual goal set by the Health Services Industry Committee of the Price Commission, and represents a rate of increase of only one third the rate of increase prior to phase I. Since the goal of the economic stabilization program was to halve the rate of inflation, the record achieved by physicians surpassed considerably the expectations of the program. Thus, there is no indication that physicians' fees have been a major inflationary factor during the course of the stabilization program, and it is difficult to discern any rationale for imposing mandatory controls in this sector. Continued controls do not appear to be the just reward for this record of compliance. We submit that this precedent could have a demoralizing effect on other industries which might well conclude that a record of restraint does not preclude imposition of a continued regimen of control. . . .

"All activities require the basic factors of production, and all of us must compete in the marketplace for these necessary goods and services. It will become increasingly difficult for the health care services to obtain needed material and manpower unless the stabilization program is administered in a nondiscriminatory fashion."

\* \* \*

The National Cancer Institute has established an International Tumor Immunotherapy Registry to serve as a center for collection, storage and exchange of information on immunological methods of treating cancer.

The registry will record physicians' experience with immunotherapy for human cancer, including methods of administration, results of the treatment, and possible side effects. It will be kept up-to-date by periodic progress reports from the physicians, who will in turn receive newsletters containing summaries of the most recent information. Computers are expected to handle much of the work involved in maintaining the registry.

Immunological methods of cancer treatment, which stimulate a patient's immune system to attack cancer cells, are increasingly being evaluated against types of cancer not treatable by other methods. Many different approaches are being explored, and results have been variable. It is hoped that the rapid communication afforded by the registry will prevent needless duplication of unsuccessful treatment and encourage cooperation in well-controlled studies of promising approaches.

\* \* \*

The American Medical Association warned of "possible adverse consequences" of abolishing the physician-patient privilege in federal court cases.

The AMA's "deep concern" was expressed in letters from Ernest B. Howard, M.D., AMA executive vice president, to the chairmen of the House and Senate judiciary committees which were considering such an abolition in the proposed new federal rules of evidence.

Dr. Howard reiterated the Association's position that "a qualified physician-patient relationship should be recognized." He said that the pertinent rule in the American Bar Association's Uniform Rules of Evidence would be preferable to the complete abolition of the privilege.

The House committee was sent a copy of the AMA's statement on the matter presented to the Advisory Committee on Federal Rules of Evidence, Judicial Conference of the United States.

"We urge your committee to consider the effect of the abolition of the general physician-patient privilege noted in our statement and the confusion that may become prevalent if state and federal courts observe different rules when considering evidence based upon confidential communications made by a patient to his attending physician during the course of the physician-patient relationship," Dr. Howard said.

"The American Medical Association, as you will notice, does not advocate that an absolute or unrestricted physician-patient privilege be established. Acceptance of the basic concept of the physician-patient privilege (with limitations and restrictions that assure the proper administration of justice) is vital, however, to avoid abuse of individual rights and inhibition of frank communication essential in the physician-patient relationship."

"The physician-patient relationship is traditionally a confidential relationship requiring a

high level of trust on the part of the patient. For proper diagnosis and treatment of a patient's illness it is often essential that the patient be encouraged to disclose facts, circumstances, opinions and attitudes concerning his personal or family life. Some of these disclosures are pertinent to the diagnosis and treatment and others are not. The pertinence cannot be determined until the disclosure has been made by the patient and evaluated by the physician.

"Patients generally believe that what they disclose to their physicians in confidence will not be revealed to others without the patient's consent. Although most patients probably do not understand the legal concept of privileged communication, they would certainly be shocked to learn that their physician could be compelled, under penalty of contempt, to reveal in a court proceeding the most intimate and private information which they have given to the physician in reliance on this confidentiality. Obviously, not all of the information given by a patient to a physician has that degree of intimacy and privacy which would make compulsory disclosure disruptive of the physician-patient relationship. Because of wide variations in personal and individual sensitivity of patients, however, it does not appear to be practical to enumerate the specific kinds of information that are barred from disclosure. Proper concern for individual rights would seem to dictate that, as far as possible, the patient should be the one to determine what kind of information is to be considered confidential and barred from compulsory disclosure.

"It is relatively easy to identify areas of medical inquiry which are most likely to result in disclosures by a patient that should be kept secret. These would include sexual impotence, sexual sterility, venereal disease, pregnancy of the unwed, homosexuality, leprosy, epilepsy, and artificial insemination. Disclosure of personal information in these areas would be considered harmful and grossly embarrassing to most patients. Disclosures in many other areas, however, would be equally repugnant to some patients.

"In the field of psychiatric care, especially, the free expression of facts, occurrences, actions, thoughts, feelings and dreams by the patient to the physician is often deemed essential for effective diagnosis and treatment. In this field,

compulsory disclosure of such matters would be most harmful to the welfare of the patient.

"The medical profession recognizes also that the proper administration of justice is essential for the welfare of the public, including patients and physicians. It is aware that a rule of complete privilege, such as that applied in the attorney-client relationship, can lead to abuses which result in a miscarriage of justice. If a patient uses a broad physician-patient privilege to bar disclosure of relevant information which would adversely affect the outcome of litigation of a liability claim made by him, this abuse of the privilege would be conducive to fraud.

"On the other hand, fraud against a patient could also be perpetrated by threatening to compel his physician to disclose private and confidential information that has little if any relevancy to the issues raised in the litigation. The total abolition of the physician-patient privilege would leave the patient substantially without protection against this kind of abuse. Judicial determination of relevancy alone would not be sufficient protection, since some degree of disclosure would be necessary to obtain the judicial determination.

"We believe that justice and a true concern about individual rights requires that a reasonable balance be reached between these competing interests. Unrestricted physician-patient privilege has undoubtedly led to instance of miscarriage of justice. Denial of any privilege, however, would also lead to abuse of individual rights and an impairment of the quality of medical care. The proper solution appears to be the acceptance of the basic concept of the physician-patient privilege with those minimum limitations and restrictions on the privilege as are reasonably necessary to assure the proper administration of justice."

The American Bar Association rule, the AMA said, "appears to provide reasonable limitations on the physician-patient privilege, sufficient to assure the proper administration of justice. It also appears to offer the patient at least a minimum degree of protection for his individual rights in relation to the disclosure of private and confidential information deemed harmful or embarrassing to him. It would, at least, be less harmful to the quality of medical care available to the public than a rule would be which completely abolished the privilege."



## PERSONAL AND NEWS ITEMS

### Physician Appointed

Dr. Neil E. Crow of Fort Smith has been appointed to the Board of Trustees at Arkansas Polytechnic College in Russellville by Governor Dale Bumpers. Dr. Crow's term will expire in 1978.

### Medical Staff Officers Named

Ouachita Memorial Hospital, Hot Springs: Dr. Jack King, chief of staff; Dr. Ronald Bracken, vice chief of staff; Dr. Doane Newton, secretary. Officers of clinical departments are: Dr. Joseph Rosenzweig, pediatrics; Dr. Thomas Burrow, surgery; Dr. Jerry Hoyt, medicine; Dr. John Haggard, obstetrics-gynecology; Dr. William Springer, radiology, and Dr. Patrick Knight, pathology.

Union Memorial Hospital, El Dorado: Dr. Margaret Harrison, chief of staff; Dr. Grady Hill, vice chief of staff, and Dr. Allan S. Pirniue, secretary-treasurer.

### Dr. Saltzman Named to Staff

Dr. Ben N. Saltzman of Mountain Home has been appointed Associate Clinical Professor of Family and Community Medicine at the University of Arkansas School of Medicine.

### Physician Attends Meetings

Dr. Curtis B. Clark of Sheridan attended the joint meeting of the Academy of Family Practice and the American Psychiatric Association as a representative of the University of Arkansas Department of Psychiatry. The meeting was held March 15th in Charleston, South Carolina.

Dr. Clark also attended the 36th Annual New Orleans Graduate Medical Assembly which was held at the Fairmont-Roosevelt Hotel in New Orleans, Louisiana.

### Speakers Bureau

The following physicians are participating in the Speakers Bureau of the Arkansas Medical Society and have filled speaking engagements: Dr. Jerry R. Stewart of Fort Smith spoke to the Booneville Rotary Club on "Smoking and Health"; Dr. Max Baldridge of Heber Springs spoke to the Heber Springs Lions Club on ophthalmology; Dr. W. W. Workman of Blythe-

ville spoke to the Parent-Teacher Association in Armorel on the subject of "Mental Health in Home and School", and Dr. Frekerick P. Feder of Fort Smith spoke to the Waldron Lions Club. The title of Dr. Feder's talk was "The Artificial Kidney".

### Physicians Named Fellows

Dr. Eugene A. Shaneyfelt of Manila has been named a Fellow of the American Academy of Family Physicians.

Dr. Herbert W. Ward of Fayetteville has been named a Fellow of the American College of Radiology.

### Physician Locates

Dr. Bob Smith, formerly of Conway, has joined Dr. William J. Wright and Dr. W. Lee Winters at Wright's Clinic with offices in West Memphis and Earle.

### Physicians Attend Conference

Dr. C. C. Long of Ozark, a member of the American Medical Association Council on Rural Health, and Dr. Ben N. Saltzman of Mountain Home attended the AMA's National Conference on Rural Health in Dallas, Texas, on March 29th and 30th.



### Doctor's Day Observed

The Woman's Auxiliary of the Sebastian County Medical Society honored physicians on March 23rd with a buffet dinner and entertainment at the Little Theatre in Fort Smith.

Area doctors were honored on March 30th by the Woman's Auxiliary to the Logan County Medical Society.

# THINGS TO COME

## Aldersgate Children's Medical Camp

Aldersgate Medical Camp will be conducted June 25 to June 30, 1973, at Camp Aldersgate just outside Little Rock. The purpose of the camp is to provide outdoor camping experience for boys and girls eight to sixteen years of age that have medical problems or handicaps that preclude their attending a regular summer camp.

Questions concerning a child's eligibility should be directed to the Camp Director at 2000 Aldersgate Road, Little Rock, Arkansas 72205. A Medical Committee will review the applications.

Campers are accepted on a first-come, first-served basis and scholarships are available. Applications for scholarships and registration forms may be obtained by writing the camp office. The telephone number is 225-1444. The Aldersgate Medical Camp is sponsored by Arkansas pediatricians and has been endorsed by the Arkansas Medical Society. Tax deductible contributions for scholarships may be made directly to the above address.

## Postgraduate Course on Biliary Tract Disease

A postgraduate course on biliary tract disease, sponsored by the American Gastroenterological Association, will be held July 26, 27, 28, 1973, in Aspen, Colorado. The course is approved for twelve hours prescribed credit by the American Academy of General Practice.

## Conference on Virology and Immunology In Human Cancer

A National Conference on Virology and Immunology in Human Cancer will be held November 29, to December 1, 1973, at the Waldorf-Astoria Hotel in New York, New York. The conference is sponsored by the American Cancer Society and the National Cancer Institute. For information write: Sidney L. Arje, M.D., National Conference on Virology and Immunology in Human Cancer, American Cancer Society, Inc., 219 East 42nd Street, New York, New York 10017.

## Forum on Medical Affairs

The Forum on Medical Affairs will meet June 24, 1973, the opening day of the American Med-

ical Association Convention, at the Americana Hotel in New York. Guest speakers will include Mr. John Alexander McMahon, president of the American Hospital Association; Dr. Edmund C. Casey, president of the National Medical Association; Mr. Leslie D. Henry, president of the Health Insurance Association of America, and the Honorable Joe D. Waggonner (Democrat) of Louisiana, a member of the Ways and Means Committee of the United States House of Representatives.

## American College of Physicians — Postgraduate Courses

A postgraduate course on "Medical Oncology and Chemotherapy" will be held June 14-16, 1973, at the Mayer Auditorium, University of Southern California School of Medicine, Los Angeles, California. The course is applicable for twenty-five and one-half hours of credit toward Category I of the American Medical Association's Physician's Recognition Award and for twenty-five and one-half elective hours credit by the American Academy of General Practice.

A postgraduate course on "Clinical Aspects of Blood Transfusion" will be held June 18-20, 1973, at the Kellogg Center for Continuing Education, Michigan State University, East Lansing, Michigan. Credit of twenty-two hours allowed toward the American Medical Association's Physician's Recognition Award.



## Dr. Dennis O. Davidson

Dr. Dennis O. Davidson has been accepted for membership in the Faulkner County Medical Society. He is a native of Beebe, Arkansas.

Dr. Davidson was graduated from Hendrix College in Conway in 1966, and from the University of Arkansas School of Medicine in 1971.

## NEW MEMBERS

He completed his internship at Medical Center Hospital, Columbus, Georgia.

He is associated with Dr. Bob G. Banister at 1300 Parkway in Conway. Dr. Davidson is a family physician and surgeon.

### Dr. Charles M. Davis

Dr. Charles M. Davis is a new member of the Jefferson County Medical Society. He was born in Newport, Arkansas.

Dr. Davis was graduated from the University of Arkansas and the University of Arkansas School of Medicine. His internship was completed at Wilford Hall United States Air Force Medical Center, Lackland Air Force Base, Texas, and his residency work in Dermatology was done at the University of Miami, Florida. Dr. Davis served as Assistant Clinical Professor in 1971-72, at the University of Texas at San Antonio. He also served as chief of Dermatology Research at Wilford Hall United States Air Force Medical Center.

Dr. Davis is Board Certified by the American Board of Dermatology and holds a membership in the American Academy of Dermatology. He is in practice at 1708 West 42nd Avenue, Pine Bluff.

### Dr. John Wayne King

A new member of the Pope-Yell County Medical Society is Dr. John W. King. Dr. King is a native of Little Rock and received a B.S. degree from Arkansas Polytechnic College at Russellville in 1961. In 1965, Dr. King was graduated from the University of Arkansas School of Medicine. He served in the United States Army from 1965 until 1972 and completed his internship at William Beaumont General Hospital, El Paso, Texas. He received his residency training in Radiology at Brooke General Hospital, San Antonio, Texas.

Dr. King is Board Certified by the American Board of Radiology. He is associated with St. Mary's Hospital in Russellville and specializes in Radiology.

### Dr. Joseph H. Lyford, Jr.

Dr. Joe H. Lyford has been accepted for membership in the Pope-Yell County Medical Society. He was born in Helena, Arkansas.

Dr. Lyford received his pre-medical education at Hendrix College at Conway, and received his medical education at the University of Arkansas School of Medicine, graduating in 1957 and 1961, respectively. His internship was completed

at Hillcrest Medical Center in Tulsa, Oklahoma. Dr. Lyford practiced in Buena Vista, Colorado, and Conway, Arkansas, before entering the United States Army. Following his release from the Army in 1969, he was in residency training in Ophthalmology at the University of Arkansas Medical Center.

Dr. Lyford is associated with Drs. Ellis Gardner, Max Mobley and Richard K. Lovell, Sr., in the practice of Ophthalmology at 111 North El Paso in Russellville.

### Dr. William L. Griggs, III

Dr. William L. Griggs, III, a native of Pennington Gap, Virginia, is a new member of the Sebastian County Medical Society.

In 1958, Dr. Griggs received a B.S. degree from Hampden-Sydney College, Hampden-Sydney, Virginia, and in 1962 he received an M.D. degree from the University of Virginia School of Medicine, Charlottesville, Virginia. He interned at the University of Florida School of Medicine, Gainesville, Florida, and was also a Clinical Fellow in Neurology at the same institution. Dr. Griggs served six years with the United States Army. From 1969 until 1972, he was associated with the Scott and White Clinic in Temple, Texas.

Dr. Griggs is Board Certified by the American Board of Psychiatry and Neurology. He is presently associated with the Holt-Krock Clinic at 1500 Dodson Avenue in Fort Smith and specializes in Neurology. He serves as Assistant Clinical Professor, Division of Neurology, University of Arkansas School of Medicine.

## RESOLUTIONS



### DR. JACK MURFF SHEPPARD

WHEREAS, our Lord and Master, in his infinite wisdom, has taken from us, our friend and co-worker, Dr. Jack Murff Sheppard, whose happy, friendly manner and diligent, efficient work have been an inspiration to us all, and

WHEREAS, Dr. Sheppard's untiring efforts to heal the wounds and allay the suffering of all the community, and his leadership in the

## RESOLUTIONS

affairs of our medical organizations have benefitted the entire area, and

WHEREAS, Dr. Sheppard has always applied himself in diligence and devotion to the purpose for which our organization was founded.

NOW, THEREFORE, BE IT RESOLVED, that the Union County Medical Society expresses to Mrs. Sheppard and the family members its heartfelt sympathy at the untimely loss which they have sustained, and

BE IT ALSO RESOLVED, that copies of this resolution be furnished to the family, to The Journal of the Arkansas Medical Society, and to The Arkansas Academy of Family Physicians.

Adopted at the regular meeting of the Union County Medical Society February 6, 1973.

### **Dr. Charles Hall**

WHEREAS, God in his infinite mercy has seen fit to call from our midst, Dr. Charles Hall, and,

WHEREAS, Dr. Hall had faithfully served his patients in the community at large throughout his many years of medical practice, and,

WHEREAS, Dr. Hall, during his years of practice has reflected throughout his entire medical career the highest ideal of his profession, and,

WHEREAS, the Sebastian County Medical Society mourns his loss,

THEREFORE BE IT RESOLVED by the Sebastian County Medical Society, in regular meeting on April 10, 1973, hereby adopts this resolution and directs that a copy be spread on the minutes of the Society, that a copy be furnished the family, and that a copy be published in the Journal of the Arkansas Medical Society.

Sebastian County Medical Society

April 10, 1973

### **Dr. Morgan Scott**

WHEREAS, God in his infinite mercy has seen fit to call from our midst, Dr. Morgan Scott, and,

WHEREAS, Dr. Scott had faithfully served his patients in the community at large through-

out his many years of medical practice, and,

WHEREAS, Dr. Scott, during his years of practice has reflected throughout his entire medical career the highest ideal of his profession, and,

WHEREAS, the Sebastian County Medical Society mourns his loss,

THEREFORE BE IT RESOLVED by the Sebastian County Medical Society, in regular meeting assembled on April 10, 1972, hereby adopts this resolution and directs that a copy be spread on the minutes of the Society, that a copy be furnished to the family, and that a copy be published in the Journal of the Arkansas Medical Society.

Sebastian County Medical Society

April 10, 1973



### **ANSWER—Electrocardiogram of the Month**

Atrial rate = 85/min

Ventricular rate = 85/min

PR = 0.18

QRS = 0.11 to 0.12

QT = 0.38 to 0.40

The mean QRS axis is directed more negative than positive in lead II; but the QRS is markedly biphasic in virtually all the limb leads. The duration of the QRS is a little long, but not quite what you usually see in a bundle branch block. The terminal QRS is rightward, suggesting "incomplete right bundle" but there is powerful voltage posteriorly directed (see sagittal and horizontal loops, and the  $\frac{1}{2}$  V<sub>2</sub> S wave). There are small Q's in I and aV<sub>1</sub> which are borderline abnormal. There is marked ST segment depression and same T wave inversion V<sub>4-6</sub>, as well as I, II, III and aVF. These are ischemic changes, and in old terminology were often regarded as "L.V. Strain" particularly when coupled with hypertrophy. The P waves in V<sub>1</sub> have a rather large negative terminal deflection suggesting left atrial enlargement. Taking all of these findings together with the clinical history provided, and one must suspect organic heart disease. This tracing is compatible, and somewhat suggestive of Hypertrophic Subaortic Stenosis—or Asymmetric Septal Hypertrophy (ASH—as it will probably soon be uniformly called). See Circulation v. 34 Oct. 1966 p. 585. The Q waves are thought to represent increased septal voltage from the hypertrophied area. The development of a conduction delay as in this example is relatively common. A positive family history for the lesion is also frequently discovered — see BRIT Hrt Jour Nov. 1972.



## OBITUARY

### Dr. Alvin E. Longstreth

Dr. Alvin E. Longstreth died March 22, 1973, at the age of sixty-five. He was born in Little Rock on November 27, 1907, and practiced there for twenty-eight years.

Dr. Longstreth attended Arkansas Polytechnic College in Russellville and was graduated from Centre College in Danville, Kentucky, the University of Arkansas, and the University of Arkansas School of Medicine. He completed his internship at the University Hospital in Little Rock.

Dr. Longstreth served as athletic director and instructor of medical sciences at Little Rock Junior College (now the University of Arkansas at Little Rock) before entering medical school. He served thirty-six years in the military, beginning in 1923 as a member of the Arkansas National Guard and ending with his retirement as a colonel in 1960. He was a member of the American Medical Association, the Arkansas Medical Society, the Pulaski County Medical Society, and the Magnolia Masonic Lodge.

Surviving Dr. Longstreth are his wife, Mrs. Clarine Snow Longstreth, one daughter, and two brothers.



### Unilateral Pulmonary Edema After Pleural Aspiration

D. H. Trapnell and J. G. B. Thurston (Westminster Hosp, London)

*Lancet* 1:1367-1370 (June 27) 1970

In four patients, unilateral pulmonary edema developed when a large collection of either air or fluid was removed from the pleural cavity. One patient died as a result. In each patient pulmonary edema developed in the lung that had been compressed by the pleural air or fluid. The volume of any pleural aspiration should be kept to less than one liter if the underlying lung has been compressed for more than a week, and below 1,500 ml in any circumstances.

### Sulfur Dioxide: Sulfite

A. F. Gunnison (550 First Ave, New York 10016)  
and A. W. Benton

*Arch Environ Health* 22:381-388 (March) 1971

The chemistry of sulfite-bisulfite (the hydrate of sulfur dioxide) in mammalian plasma and serum was investigated in vitro and in vivo. The longevity of sulfite in contact with mammalian plasma and known components of blood was determined by adaptation of a colorimetric method for sulfite analysis. Evidence from all experiments indicated that under physiological conditions sulfite reacts reversibly with disulfide bonds present in the plasma, resulting in formation of S-sulfonates (sulfitolysis). Free sulfite was not detected in plasma of rabbits immediately following exposure to approximately 25 ppm SO<sub>2</sub>, but there was good evidence for substantial elevation of plasma and serum S-sulfonate content. Reactivity of sulfite with plasma constituents may protect many body tissues from the insult of relatively high concentrations of sulfite and may facilitate prolonged exposure to very low levels of sulfite.



### Significance of Liver in Production of Lithogenic Bile in Man

A. R. Vlahcevic, C. C. Bell, Jr., and L. Swell (VA Hosp, Richmond, Va)

*Gastroenterology* 59:62-67 (July) 1970

Gallbladder bile, hepatic bile, and gallstones were obtained from 20 patients at surgery. The bile was analyzed for bile acids, cholesterol, and phospholipids, and the gallstones for cholesterol. There was no significant difference in the lipid composition between the gallbladder and hepatic bile of patients with cholesterol gallstones. The gallbladder and hepatic bile of patients with cholesterol gallstones was out of the micellar zone or near the line of cholesterol saturation. Four patients with pigmented stones with only traces of cholesterol had normal hepatic and gallbladder bile. Two patients had no demonstrable gallstones, but the gallbladder and hepatic bile were abnormal. The gallbladder does not seem to play a major role in the alteration of the bile secreted by the liver; the liver is the principle site for the production of abnormal bile associated with cholesterol gallstone formation in man.

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AUG 23 1974

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OCT 31 1975

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